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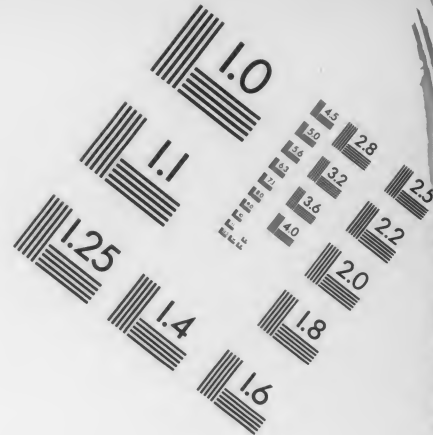
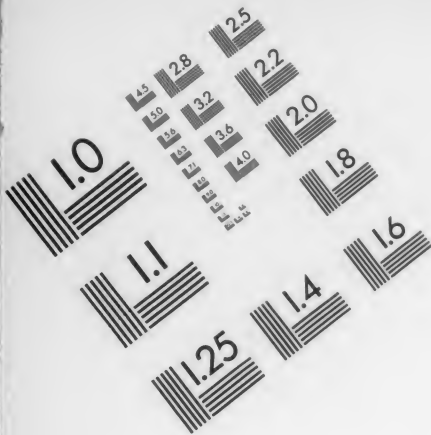


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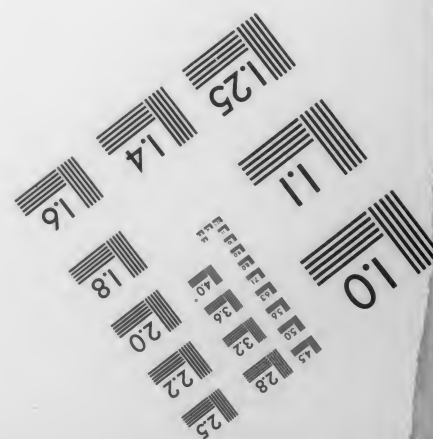
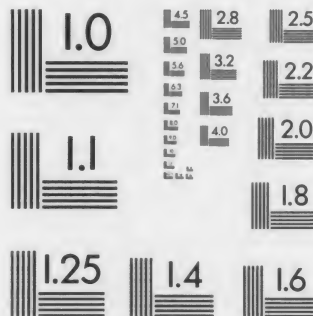
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FROM THALES TO COMTE.

BY GEORGE HENRY LEWES.

THIRD EDITION.

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PREFACE.

BY A SLIGHT CHANGE in the title this edition is separated from its predecessors, as if it were a new work, which indeed in many respects it is. The first edition appeared in 1845-6 in four pocket-volumes; addressed to the general public rather than to well-read students, it had no pretensions to the completeness or erudition displayed in many other Histories, being little more than a rapid survey of the course of metaphysical speculation, written with the avowed purpose of dissuading the youth of England from wasting energy on insoluble problems, and relying on a false Method. With this object of turning the mind from Metaphysics to Positive Philosophy, it employed History as an instrument of Criticism to disclose the successive failures of successive schools.

In 1857, after a sale of several thousand copies of the stereotyped edition, the Library Edition, in one volume octavo, was prepared with a view of rendering the book more acceptable to students. A graver, fuller treatment of various portions, some important additions, and considerable alterations in the style were found necessary, but no change in purpose or doctrine.

In the edition now issued my readers of twenty years

ago will hardly recognise the 'Biographical History of Philosophy,' so considerable have been the alterations and enlargements. They will see, indeed, the spirit and the purpose still unchanged; but it will be like recognising in an iron-grey citizen the features of the third-form boy. I adhered to the Positive Philosophy in 1845, and I adhere to it still. But much that was dim to me then has become clear now, much that was conviction then has ceased to be conviction now; my estimates of men and theories have altered in the course of years. The reader will doubtless feel, even more than I can feel, the want of unity in various parts of this product of changing years. I have done my best to lessen the discordance between 1845 and 1867, and would gladly have rewritten the whole had health permitted such a task.

Among the more important additions the following may be specified. In the PROLEGOMENA, replacing the original Introduction, are discussed: What is Philosophy?—The Objective and Subjective Methods—The Test of Truth—Some Infirmities of Thought—Necessary Truths. These subjects threatened to expand into a volume, and I was forced to omit much that I had prepared. The chapters on PLATO and ARISTOTLE have been rewritten; the former with large assistance from Mr. Grote's exhaustive work; the latter with reproductions from a monograph of my own. The accounts of SCHOLASTICISM, ARABIAN PHILOSOPHY, and ROGER BACON, are entirely new. The chapters on FRANCIS BACON, DESCARTES, LEIBNITZ, CONDILLAC, and HARTLEY have been rewritten. Several new biographical details are given in the account of SPINOZA, which has also been rewritten. KANT has been restudied, and the exposition and criticism of his doctrines

are new. The chapter on GALL has also been rewritten with, I believe, a more decisive presentation of his claims, and a more decisive exposition of his imperfections. I had hoped to rewrite the chapter on HEGEL, especially to answer the challenge of Mr. Stirling's work ('The Secret of Hegel'), but my health gave way, and as my estimate of Hegel's value was unchanged I shrank from the labour.

With regard to Auguste Comte it has been a source of great regret to me that a larger space was not at my disposal; the more so as he is now the thinker of all others about whom the greatest curiosity is manifested. What I have attempted is not such a detailed exposition as would flatter the incurious indolence of men who love to talk confidently upon second-hand knowledge, but such general indications of the Positive Philosophy as will enable the student to appreciate its drift and importance, and will guide him in the understanding of Comte's writings. I am often asked to recommend some 'brief account of the system,' by those who wish to profit by Comte's labours (or perhaps only to talk knowingly of them), yet shirk the labour of reading the works which they profess to consider of importance. My answer is: study the *Philosophie Positive* for yourself, study it patiently, give it the time and thought you would not grudge to a new science or a new language, and then whether you accept or reject the system you will find your mental horizon irrevocably enlarged. 'But six stout volumes!' exclaims the hesitating aspirant. Well, yes, six volumes requiring to be meditated as well as read: I admit that they 'give pause' in this busy, bustling world of ours; but if you reflect how willingly six separate volumes of Philosophy would be read in the course of the

year, the undertaking seems less formidable. You would not think of giving the necessary time and labour unless you had some previous conception of the result being worth the price; and no one who considers the immense importance of a Doctrine which will give unity to his life, would hesitate to pay a far higher price than that of a year's study. It is to place before the student this conception of the result that I have chiefly shaped my exposition of the aims and means of the Positive Philosophy.

THE PRIORY: May 1867.

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PROLEGOMENA.

- I. WHAT IS PHILOSOPHY?
- II. THE OBJECTIVE AND SUBJECTIVE METHODS.
- III. THE TEST OF TRUTH.
- IV. SOME INFIRMITIES OF THOUGHT.
- V. NECESSARY TRUTHS.

Meine Absicht ist, Alle diejenigen, so es werth finden, sich mit Metaphysik zu beschäftigen, zu überzeugen: dass es unumgänglich nothwendig sei, ihre Arbeit vor der Hand auszusetzen, alles bisher Geschehene als ungeschehen anzusehen und vor allen Dingen zuerst die Frage aufzuwerfen: 'ob auch so etwas, als Metaphysik, überall nur möglich sei?'—KANT: *Prolegomena zu einer jeden künftigen Metaphysik.*

Gelänge es mir, mit meiner Darstellung der Philosophie auch nur eine Seele abzustreiten, die sich mit ihr in jene dunkle Tiefe der Betrachtung verloren geben will, wo Alles nur Heulen und Zähnkappen und jeder wider den Andern ist, so würde ich schon glauben, etwas geleistet zu haben.—FECHNER: *Ueber die physikalische und philosophische Atomenlehre.*

Der Mensch ist nicht geboren, die Probleme der Welt zu lösen, wohl aber zu suchen, wo das Problem angeht, und sich sodann in der Grenze des Begreiflichen zu halten.—GOETHE.

I. WHAT IS PHILOSOPHY?

§ 1. THEOLOGY, Philosophy, and Science constitute our spiritual triumvirate. The limits of their several dominions have been insensibly shifting, so that at various epochs in History they have been of very varied importance. For centuries the predominance of Theology was absolute and undisputed. Philosophy, meanwhile, grew apace, till at last it was enabled to assert an independent position; and while these two rivals struggled for supremacy, Science was also quietly and obscurely feeling its way to independence.

§ 2. The office of Theology is now generally recognised as distinct from that of Philosophy and from that of Science. Its ancient claim to authority over all regions of inquiry has long been felt to be untenable, and has been frankly relinquished. Although claiming to hold the keys of the highest Truth, it nevertheless no longer pretends to decide upon the lower, but confesses its inability to furnish Research with effective Methods, or Knowledge with available data. It restricts itself to the region of Faith, and leaves to Philosophy and Science the region of Inquiry. Its main province is the province of Feeling; its office is the *systematisation of our religious conceptions.*

This is the office not of one Theology, but of all. No matter what other functions the various Theologies may assume, they invariably assume this, and give it pre-eminence. It is thus not only their common characteristic, but also their highest characteristic; and now that the course of human evolution has detached both Philosophy and Science from Theology, this systematisation remains its sole function.

§ 3. The office of Science is distinct. It may be defined as the *systematisation of our knowledge of the order of phenomena considered as phenomena*. It co-ordinates common knowledge. It explains the order of phenomena, by bringing them under their respective laws of co-existence and succession, classing particular facts under general conceptions.

§ 4. The office of Philosophy is again distinct from these. It is the *systematisation of the conceptions furnished by Theology and Science*. It is *ἐπιστήμη ἐπιστημῶν*. As Science is the systematisation of the various generalities reached through particulars, so Philosophy is the systematisation of the generalities of generalities. In other words, Science furnishes the Knowledge, and Philosophy the Doctrine.

Each distinct science embraces a distinct province of knowledge. Mathematics treats of magnitudes, and disregards all other relations; Physics and Chemistry concern themselves with the changes of inorganic bodies, leaving all vital relations to Biology; Sociology concerns itself with the relations of human beings among each other, and with their relations to human beings in the past and in the future. But Philosophy has no distinct province of knowledge: it embraces the whole world of thought: it stands in the same relation to the various sciences as Geography stands to Topography. All the sciences subserve its purpose, furnish its life-blood. It systematises their results, co-ordinating their truths into a body of Doctrine.

Thus, while Theology claims to furnish a system of religious conceptions, and Science to furnish conceptions of the order of the world, Philosophy, detaching their widest conceptions from both, furnishes a Doctrine which contains an *explanation of the world and of human destiny*.

Although this may appear a novel definition, it will, on examination, be found to characterise the persistent function which in all times Philosophy has exercised. Moreover, it will be found applicable in special cases, such as the philosophy of Science, the philosophy of Religion, the philosophy of History, or the philosophy of Art. Thus,

given a science with its generalities laboriously ascertained, the philosophy of that science will be the co-ordination of its highest truths, the methods by which those truths were reached, and the relation which both these bear to the truths and methods of other sciences. I formerly defined Philosophy 'an attempt to explain the phenomena of the universe.' This is too vague, and fails to mark the point of separation from Science and Theology; but though vague, it expresses what has been the unconscious and persistent effort of philosophical speculation.

§ 5. Such is the relative position of each of the three great spiritual powers at the present time. These positions were not always thus sharply defined, but the history of thought exhibits a continuous development in these directions. Theology at first was absolute and autocratic, not only furnishing religious doctrine, but dictating generalities to Philosophy, and explanations of all but the commonest phenomena to Science. Philosophy served as a handmaid to Theology, until she grew strong enough to think for herself. Science kept timidly aloof from all questions on which Theology had pronounced, and submitted to a peremptory order to be silent when her conclusions were unacceptable. Fortunately for Humanity, this creeping servitude was incompatible with the continued exercise of reason. As discoveries extended, as more and more phenomena were satisfactorily reduced to order, the widening reach of Inquiry embraced problem after problem, until now all the facts within human ken are assumed to be reducible to order on the scientific Method. With the growing strength came a growing courage, and timidity gave place to a proud self-reliance. Theology was first quietly yet firmly excluded from Cosmology, its explanations of the world being set aside as myths; then it was excluded from Biology; and now even Sociology is claimed as amenable to scientific Methods, because all social phenomena are seen to be under the dominion of law. History shows a curious reversal of the principle of accommodation. Just

as Science was formerly compelled to accommodate its conclusions to Theology, no matter at what cost of consistency, with what sophistical excuses, so Theology is now compelled to accommodate its dicta to the conclusions of Science, by utterly distorting the meaning of words. After having for centuries pursued its researches under the denunciation of Theology, and under the burden of a fear, terrible to delicate consciences, of approaching heresy when it was seeking truth, Science has at length ceased its timorous and futile efforts to reconcile its conclusions with anything but its own principles.* The problem is no longer: Given a doctrine of indisputable authority, how to reconcile the conclusions of Experience with its dicta; the problem is: Given certain indisputable conclusions of Experience, how to reconcile the dicta of an ancient doctrine with these irresistible conclusions.†

§ 6. The conflict was inevitable and was foreseen from the first. Inevitable, because the two powers are characterised by two different Methods, that of Theology being the Subjective, that of Science the Objective. These Methods will have to be considered more particularly in a future section; for the present, I merely call attention to the fact of their opposition, and to the fact that Philosophy occupying an intermediate position has necessarily employed both Methods by turns. When it was in alliance with Theology, it adopted the Subjective Method: this was during its ontological phase. When the advance of Science furnished it with more and more material, Philosophy gradually detached

* In 1864 was seen a memorable protest, on the part of scientific men, against every attempt to control their researches. In spite of the theological pressure, which is so powerful in England, our leading savans openly and *indignantly* refused to sign a declaration of dependence.

† A somewhat analogous inversion has taken place in the social problem. Formerly the problem was: Given the welfare and advantages of the Few, how best to reconcile with these the welfare of the Many; it now is: Given the welfare of the Many, how best to secure the advantages of the Few. The new Astronomy transferred the centre of the world from the small Earth to the mighty Sun; the new Sociology transfers the centre of social life from the small group of Idlers to the mighty mass of Workers.

itself more and more from Theology, without, however, consciously and completely adopting the Objective Method: this was its psychological phase. Finally, the all-embracing progress of Science has forced Philosophy frankly to adopt the Objective Method: this is its present phase, the Positive Philosophy.

Such in brief is the story we have to tell. Our history is the narrative of the emancipation of Philosophy from Theology and its final constitution through the transformation of Science.

§ 7. The annals are red with the flames of persecuting wrath at every attempt Philosophy made to assert independence. Naturally enough. No autocrat can be lenient to a powerful pretender; and the more reasonable the pretender's claim the more hateful will be its assertion. Philosophy, in turn, was equally intolerant of its rival Science, and allied itself with its ancient persecutor to persecute the new pretender.

Alloof from the strife of polemics and personal irritations, the wise calm spirits of our day resign themselves to the Triumvirate, defining for each its separate province, and trusting in a harmony of combined effort which hitherto has been impossible. It is time that the great perturbations should cease, and the only struggles be carried on within the limits of each domain: theologians in controversy with theologians, savans with savans, philosophers with philosophers. The three powers have always hitherto been in a state of conflict or of armed peace. The problem of our age is, how to change this conflict into a concourse, to unite the independent and dissident efforts in dependent and harmonious efforts. This problem may be solved by the transformation of Science into Philosophy, and by the transformation of Philosophy into Religion. But whether we reject or accept that solution, the systematisation of our religious conceptions and all its practical applications must be a distinct office from the systematisation of our conceptions of the order of phenomena; and the harmony of the two can

only be effected by a Doctrine which combines the generalities of both. The future of Philosophy is in this task of reconciliation.

§ 8. In the former editions of this History the word Philosophy carried a more restricted meaning than is assigned to it in the preceding paragraphs. It was used as synonymous with Metaphysics, or more specially with Ontology. That restricted use of the word was forced on me by the practice of all previous historians, and I stated why it was forced upon me, and in what sense the word was to be understood. In vain. The old vague indissoluble associations could not be escaped. The reader quickly forgot my explanation, and interpreted the word in his vague sense, instead of in my restricted sense. The large latitude in which the word has come to be used all over Europe has obliterated all special meaning, and this notably in England, where, as Hegel sarcastically remarks, microscopes and barometers are dignified as 'philosophical instruments,' Newton is styled a philosopher, and even parliamentary proceedings are sometimes said to be philosophical.* In presence of such looseness of expression what was the historian to do? Obviously, he could only declare the sense in which the word was used in other histories of Philosophy, and abide by that. Had I not fixed a precise meaning to the word I must have written a History of Knowledge, not a History of Philosophy.

My explanation was of little avail. The object of my work being to show the essential futility of Philosophy, in the restricted sense of that word, I was supposed to have intended a crusade against Philosophy in the wider sense; and readers who no more believed in Ontology than I did were startled by my attacks on it under the name of Philosophy. After this experience I cannot place much reliance on the security of any definition; but for the sake of attentive readers, I have stated what position Philosophy holds

* HEGEL: *Geschichte der Philosophie*, i. 72. Compare also HAMILTON, *Metaphysics*, i. 63.

in relation to Theology and Science; and to avoid equivocation I shall use the words Metaphysical Philosophy, or Ontology, and sometimes simply Metaphysics, to designate inquiries on the Subjective Method into the ultimate essence of things.

§ 9. Unhappily there is no uniformity even in the use of the term Metaphysics. Sometimes it means Ontology. Sometimes it means Psychology. Sometimes it means the highest generalities of Physics. The first of these inquiries I hold to be utterly futile, hopelessly beyond human ken. But the second and third are legitimate inquiries, which take their place in human knowledge whenever they are pursued on the Objective Method, and only deserve reproof when pursued on the Subjective Method, upon which *all* problems are insoluble. As I have shown at some length elsewhere,* all problems are legitimate which admit Verification of their premisses and conclusions; and no Verification is possible except on the Objective Method.

§ 10. In the arrangement of Aristotle's treatises, those which succeeded the Physics were called τὰ μετὰ τὰ φυσικὰ βιβλία—indicating that they were to be studied *after* the Physics, either because their topics were evolved from physical inquiries, or because their topics were beyond physical inquiry. The equivocation still continues. Metaphysics may concern itself with the last conclusions of Physics, dealing with these results as its elements; or it may concern itself with inquiries beyond the region of Experience, entirely removed from Verification, transcending Sense, and drawing its data from a higher source. Obviously, in proportion as it seeks its elements in the relations of sensible phenomena it forms one branch of legitimate inquiry, and the only question then is as to the validity of the Method it employs. In proportion as it seeks its elements in the relations of supersensible phenomena it separates itself from Experience, ceases to be amenable to the ordinary canons of

* Aristotle, chap. iv.

Research, and grounds its existence on the possession of a peculiar criterion—a direct and immediate knowledge of the Absolute.

The confusion of these two distinct conceptions is very common, and is the source of much perplexity. Those who hold the doctrine of the relativity of knowledge may admit without inconsistency many principles which are metaphysical in the sense of transcending Experience in their generality, although founded on Experience and conformable with it: such, for example, are causality and inertia. There is a large admixture of such Metaphysics, in all philosophical Physics; and in this sense we may call Metaphysics the *prima philosophia*. But Experience is here the source and pattern: the Objective Method with its rigorous tests of Verification rules as absolutely here as in every other department of positive inquiry. The Unknown is only a prolongation of the Known, and is trusted only so far as it is in strict conformity with the Known. The Invisible is but the generalisation of the Visible.

Those who hold that, over and above the conceptions furnished through Experience, the mind brings with it certain conceptions antecedent to and independent of Experience, who hold that, over and above our relative knowledge, we have absolute knowledge, *reverse* this procedure from the Known and Visible to the Unknown and Invisible; and starting from what their rivals declare to be not simply the Unknown but the Unknowable, they deduce from it certain conclusions which they present as ontological truths capable of guiding us in discovering the relations of phenomena. Let Descartes be heard on this point:—‘*Perspicuum est optimam philosophandi viam nos sequuturos, si ex ipsius Dei cognitione, rerum ab eo creatarum explicationem deducere conemur, ut ita scientiam perfectissimam, quæ est effectuum, per causas acquiramus.*’* The fallacy lies in concluding that because, in Mathematics and all deductive operations, we unfold the particulars contained implicitly in the gene-

* DESCARTES: *Princip. Philos.* ii. § 22.

ralities, we should therefore always seek particulars in this way. But the procedure is only justifiable when the generalities are proved to be indisputably true, and when the particulars deduced are by Verification shown to be really as well as verbally contained in them. Now, what are the chief objects of absolute knowledge, the generalities from which ontologists deduce? They are God, Freedom, Immortality, Causality, Existence: the noumena of which all the manifold experiences are phenomena.* That it is possible to *infer* these, no one denies; but their value as inferences opens an interminable discussion. The ontologists claim to *know* them directly, immediately, certainly. Their opponents affirm—and endeavour psychologically to prove—that such knowledge is impossible, and that, if possible, it would be infertile, because incapable of being applied to the problems of phenomena except through Experience; infertile, because it can only be a comparison of ideas with ideas, never of ideas with facts; and thus stumbles over the old sceptical objection—*τίς κρινεῖ τὸν ὑγιεινόν*; Suppose, for example, that antecedently to all Experience we know the general law of Causality, it is only through Experience we can enrich this knowledge. We may know that every effect has a cause; this knowledge we may have brought with us into our phenomenal life; but what concerns us is, to know the particular cause of each particular effect, and if we can ascertain that, the general axiom may be disregarded; if we cannot ascertain that, the general axiom is powerless.

§ 11. The valid objection against Metaphysics is not so much against the subjects of inquiry as against the Method of inquiry; if the Method were legitimate its results would be legitimated. I shall consider this Method by-and-by; for the present I invoke the unequivocal verdict of History, which pronounces it to be the prolonged impotence of two thousand years and all its results, as shifting as the visionary

* ἔστιν ἐπιστήμη τις ἡ θεωρεῖ τὸ δυνάμει καὶ τὰ τούτω ὑπάρχοντα καθ’ αὐτό.—ARISTOTLE: *Met.* iii. 1.

phantoms of reverie. When we are awake, says Aristotle, we have a world in common; when we dream, each has his own. Kant aptly applies this to metaphysicians, 'when we find a variety of men having various worlds, we may conclude them to be dreaming.' It is because the majority of thinking men have been convinced that inquiries conducted on the Metaphysical Method are but as dreams, that they have everywhere in Europe fallen into discredit. Once the pride and glory of the greatest intellects, and still forming an important element of liberal culture, the present decadence of Metaphysics is attested no less by the complaints of its few followers than by the thronging ranks of its opponents. Few now believe in its large promises; still fewer devote to it that passionate patience which is devoted by thousands to Science. Every day the conviction gains strength, that Metaphysics is condemned, by the very nature of its Method, to wander for ever in one tortuous labyrinth, within whose circumscribed and winding spaces weary seekers are continually finding themselves in the trodden tracks of predecessors who could find no exit.

Metaphysical Philosophy has been ever in movement, but the movement has been circular; and this fact is thrown into stronger relief by contrast with the linear progress of Science. Instead of perpetually finding itself, after years of gigantic endeavour, returned to the precise point from which it started, Science finds itself, year by year, and almost day by day, advancing step by step, each accumulation of power adding to the momentum of its progress; each evolution, like the evolutions of organic development, bringing with it a new functional superiority, which in its turn becomes the agent of higher developments. Not a fact is discovered but has its bearing on the whole body of doctrine; not a mechanical improvement in the construction of instruments but opens fresh sources of discovery. Onward, and for ever onward, mightier and for ever mightier, rolls this wondrous tide of discovery. While the first principles of Metaphysical Philosophy are to this day as much a matter of dispute as

they were two thousand years ago,* the first principles of Science are securely established, and form the guiding lights of European progress. Precisely the same questions are agitated in Germany at the present moment that were agitated in ancient Greece; and with no more certain Methods of solving them, with no nearer hopes of ultimate success. The History of Philosophy presents the spectacle of thousands of intellects—some the greatest that have made our race illustrious—steadily concentrated on problems believed to be of vital importance, yet producing no other result than a conviction of the extreme facility of error, and the remoteness of any probability that Truth can be reached.† The only conquest has been *critical*, that is to say, psychological. Vainly do some argue that Philosophy has made no progress hitherto, because its problems are complex, and require more effort than the simpler problems of Science; vainly are we warned not to conclude from the past to the future, averring that no progress will be made because no progress has been made. Perilous as it must ever be to set absolute limits to the future of human capacity, there can be no peril in averring that Metaphysics never will achieve its aims, because those aims lie beyond all scope. The difficulty is impossibility. No progress can be made because no basis of certainty is possible. To aspire to the knowledge of more than phenomena—their resemblances, co-existences, and successions—is to aspire to transcend the inexorable limits of human faculty. To *know* more, we must *be* more.

* 'C'est la honte éternelle de la philosophie de n'avoir pas jusqu'à présent mis au jour un résultat positif, un principe une fois pour toute reconnu et universellement admis. Bien mieux, il n'y a pas même un résultat négatif, une défaite complète, irrévocable d'une doctrine si réfutée qu'elle soit.'—DELBŒUF: *Essai de Logique Scientifique*, Liège, 1865, p. 10. Compare KANT: *Prolegomena zu einer jeden künftigen Metaphysik*, passim.

† Compare KANT in the Preface to the 2nd ed. of the *Kritik der reinen Vernunft*:—'Der Metaphysik . . . ist das Schicksal bisher noch so günstig nicht gewesen, dass sie den sichern Gang einer Wissenschaft einzuschlagen vermocht hätte; ob sie gleich älter ist als alle übrigen. . . . Es ist also kein Zweifel, dass ihr Verfahren bisher ein blosses Heruntappen und, was das Schlimmste ist, unter blossen Begriffen gewesen sei.'

In the early days of speculation all Philosophy was essentially metaphysical, because Science had not emerged from Common Knowledge to claim theoretical jurisdiction. The particular sciences then cultivated, no less than the higher generalities on Life, Destiny, and the Universe, were studied on one and the same Method; but in the course of evolution a second Method grew up, at first timidly and unconsciously, gradually enlarging its bounds as it enlarged its powers, and at last separating itself into open antagonism with its parent and rival. The child then destroyed its parent; as the mythic Zeus, calling the Titans to his aid, destroyed Saturn and usurped his throne. The Titans of the new Method were Observation and Experiment.

There are many who deplore the encroachment of Science, fondly imagining that Metaphysical Philosophy would respond better to the higher wants of man. This regret is partly unreasoning sentiment, partly ignorance of the limitations of human faculty. Even among those who admit that Ontology is an impossible attempt, there are many who think it should be persevered in, because of the 'lofty views' it is supposed to open to us. This is as if a man desirous of going to America should insist on walking there, because journeys on foot are more poetical than journeys by steam; in vain is he shown the impossibility of crossing the Atlantic on foot; he admits that grovelling fact, but his lofty soul has visions of some mysterious overland route by which he hopes to pass. He dies without reaching America; but to the last gasp he maintains that he has discovered the route on which others may reach it.

Let us hear no more of the lofty views claimed as the exclusive privilege of Metaphysics. Ignorant indeed must be the man who nowadays is unacquainted with the grandeur and sweep of scientific speculation in Astronomy and Geology, or who has never been thrilled by the revelations of the telescope and microscope. The heights and depths of man's nature, the heights to which he aspires, the depths into which he searches, and the grander generalities on Life,

Destiny, and the Universe, find as eminent a place in Science as in Metaphysics. And even were we compelled to acknowledge that lofty views were excluded from Science, the earnest mind would surely barter such loftiness for Truth? Our struggle, our passion, our hope, is for Truth, not for loftiness; for sincerity, not for pretence. If we cannot reach certain heights, let us acknowledge them to be inaccessible, and not deceive ourselves and others by phrases which pretend that these heights are accessible. Bentham warns us against 'question-begging epithets;' and one of these is the epithet 'lofty,' with which Metaphysical Philosophy allures the unwary student. As a specimen of the sentiment so inappropriately dragged in to decide questions not of sentiment but of truth, consider the following passage delivered from the professorial chair to students whose opinions were to be formed:—

'A spirit of most misjudging contempt has for many years become fashionable towards the metaphysical contemplations of the elder sages. Alas! I cannot understand on what principles. Is it, then, a matter to be exulted in, that we have at length discovered that our faculties are only formed for earth and earthly phenomena? Are we to rejoice at our own limitations, and delight that we can be cogently demonstrated to be prisoners of sense and the facts of sense? In those early struggles after a higher and more perfect knowledge, and in the forgetfulness of every inferior science through the very ardour of the pursuit, there is at least a glorious, an irresistible testimony to the loftier destinies of man; and it might almost be pronounced that in *such* a view, their very errors evidence a truth higher than all our discoveries can disclose! When Lord Bacon, with his clear and powerful reasonings, led our thinkers from these ancient regions of thought (then newly opened to the modern world) to the humbler but more varied and extensive department of inductive inquiry, I represent to myself that angel-guide, all light and grace, who is pictured by our great poet as slowly conducting the first of our race from Paradise, to leave him

in a world, vast, indeed, and varied, but where thorns and thistles abounded, and food—often uncertain and often perilous—was to be gained only by the sweat of the brow and in the downcast attitude of servile toil.*

It would be an insult to the reader's understanding to answer the several absurdities and 'question-begging' positions of this passage, which, however, is typical of much that may be read in many writers. Contempt for the speculations of the elder sages, or indeed of moderns, is a feeling we should be slow to acknowledge, whatever estimate we formed of their truth. If my polemical tone against a Method I believe to be not only hopeless but nowadays pernicious has sometimes seemed to warrant such an accusation, let me, on personal no less than philosophic grounds, rebut it here. The memory of long laborious study, ever baffled ever renewed, would alone suffice to create sympathy and respect for all earnest seekers; and if this feeling were not present, the Positive Philosophy would suffice, pointing as it does to all the great metaphysicians as necessary precursors, without whose labours Science would never have existed. It is not because the noble pioneers have perished in the trenches, that their renown should fade. If we make a bridge of their dead bodies, we should raise a monument to their devotion.

* ARCHER BUTLER: *Lectures on the Hist. of Ancient Philosophy*, ii. 109.

II. THE OBJECTIVE AND SUBJECTIVE METHODS.

§ 12. A SPANISH metaphysician truly says that the question of Method rules, and in one sense comprehends, all philosophical questions, being indeed Philosophy in action.* As it is a path on which Truth is sought, we must first come to some agreement respecting the object of search.

The question, What is Truth? has been variously answered, but instead of pausing here to consider the answers, I will propose one which is sufficiently catholic to be accepted by all schools.

Truth is the correspondence between the order of ideas and the order of phenomena, so that the one is a reflection of the other—the movement of Thought following the movement of Things.

The correspondence can never be absolute: it must, from the very structure of the mind, be relative; but this relative accuracy suffices when it enables us to foresee with certainty the changes which will arise in the external order under given conditions. If the order in our ideas respecting falling bodies sufficiently corresponds with the order of the phenomena themselves to enable us to express the Law with precision, and foresee its results with certainty, we have in that Law a truth of the only kind attainable by us.

The reader will observe that I have used the phrases 'order in ideas' and 'movement of thought' instead of adopting the ordinary formula 'ideas conformable with objects.' If Truth is

* NIETO SERRANO: *Bosquejo de la Ciencia Viviente*, Madrid, 1867. *Parte primera*, p. 31. 'La cuestion de método domina y comprende hasta cierto punto todas las cuestiones filosóficas. Efectivamente el método filosófico es la filosofía misma en acción, la cual aparece ya tal cual es desde los primeros pasos, y no puede desmentirse en lo sucesivo.'

the conformity of ideas with objects, Truth is a chimera, or Idealism is irresistible. 'La notion de *vérité* implique une contradiction,' says Delbœuf. 'Par définition, une idée n'est vraie qu'à la condition d'être conforme, adéquate à son objet. Mais, par essence, une idée est nécessairement différente d'un objet. Comment donc puis-je parler d'une équation entre l'idée et son objet?'* The old sceptical arguments are unanswerable on this ground. We need not, however, rush into Idealism by affirming the identity of ideas and their objects; we need simply give up all pretension to absolute knowledge, and rest contented with relative knowledge, which permits of our adjusting our actions to the external order. Indeed the ultimate aim of knowledge is adaptation; and we call it Truth when the adaptation is precise. What bodies are in themselves, what falling is in itself, need not properly concern us; only what are the relations in which bodies and their movements stand to our perceptions. If in attempting to comprehend these relations we succeed in so arranging our ideas that their order corresponds with the order of phenomena (as when we think of falling bodies having a velocity proportional to the time), that arrangement is Truth; but if, instead of the movement of Thought being controlled by the movement of Things, our ideas are arranged in an order which does not correspond with the order of phenomena (as when we think of the velocity being proportional to the space fallen through), that is Error. And this discloses the imperfection of the many definitions of Truth which regard it as 'conformity among ideas.' The conception of velocity proportional to *space* is a conception which would have nothing against it were it not opposed to the facts. As a pure deduction it is inevitable; a movement of Thought determined by some pre-existing thought necessarily takes that course; but a movement of Thought determined by that of Things, following step by step the succession of phenomena, leads to the conclusion of velocity proportional to the *time*.

§ 13. To attain this correspondence between the internal

* DELBŒUF: *Essai de Logique Scientifique*, p. 35.

and external order is the object of Search; and the Methods of Search are two:

- a. The Objective Method which moulds its conceptions on realities by closely following the movements of the objects as they severally present themselves to Sense, so that the movements of Thought may synchronise with the movements of Things.
- β. The Subjective Method which moulds realities on its conceptions, endeavouring to discern the order of Things, not by step by step adjustments of the order of ideas to it, but by the anticipatory rush of Thought, the direction of which is *determined* by Thoughts and not *controlled* by Objects.

Observation of objects presented to the mind must be succeeded by Conjecture respecting the connecting, but unobserved, links. The successive stages of inquiry are from Observation to Conjecture, and from Conjecture to Verification. The Subjective Method stops at the second stage: its function is Hypothesis. The Objective Method passes on to the third stage: its function is Verification. Thus while the first characterises our spontaneous tendency, and is seen in full vigour in all the early forms of speculation, the second characterises our reflective tendency, and is the source of positive knowledge. The Objective Method thus absorbs what is excellent in the Subjective Method, as Science takes up into itself whatever Metaphysics can establish, rejecting what is irrelevant and completing what is incomplete. Both physicist and metaphysicist employ Observation and Conjecture; but the physicist, if true to the Objective Method, is careful to verify the accuracy of his observations and conjectures, submitting the order of his ideas to the order of phenomena; whereas the metaphysicist, obeying the subjective impulse, is careless of Verification, and is quite ready to rely on data and conclusions which are absolutely incapable of Verification. The one freely employs Hypothesis under the rigorous condition of never relying on a conjecture as a fact, never assuming that a harmony in his conceptions must necessarily imply a corresponding

arrangement in phenomena; the other employs Hypothesis under the single condition of not thereby introducing a logical discord. In the one case the 'anticipatory rush of thought' is controlled by the confrontation of ideas with objects. In the other case the rush of thought is controlled only by the confrontation of ideas with ideas. Briefly, then, it may be said that the Objective Method seeks Truth in the relations of objects; whereas the Subjective Method seeks it in the relations of ideas.

§ 14. Philosophers expound the objective and subjective elements of which Knowledge is composed, as the *material* and *formal* elements. Things furnish the materials. Thought furnishes the forms. Objects stimulate the activity of the Mind; the Laws of mental action determine the result, in the forms of percepts, concepts, and judgments. But philosophers continually overlook the important consideration that the Mind, besides its laws which determine the forms of the material given by objects, has also a movement of its own; and this movement is determined from within, by some pre-existing movement, just as it may be determined from without, by the stimulus of objects. It is this *subjective current* which, disturbing the clear reflection of the objective order, is the main source of error. It determines those concepts and judgments which have no corresponding objects: hallucinations, reveries, dreams, hypotheses, figments. This being so, we cannot accept the notion adopted by Sir W. Hamilton from Twisten, that 'the condition of error is not the activity of intelligence but its inactivity.' On the contrary we must assign error to the activity of intelligence when it follows its own impulses in lieu of receiving the direction from objects. 'What is actually thought,' according to Twisten and his follower, 'cannot but be correctly thought. Error first commences when thinking is remitted, and can in fact only gain admission in virtue of the truth which it contains;—every error is a perverted truth.'* This seems to me so glaringly in opposition to all rational inter-

* HAMILTON: *Logic*, i. 77.

pretation that I must conclude it to mean something very different from what it says. Hamilton's comment only makes the matter worse.

§ 15. That the source of Error is *the subjective current determining the direction of the thoughts*, is easily shown. Error arises in the substitution of Inference for Presentation. No error can possibly arise in Sensation itself, but solely in the movements of thought which are prompted by the sensation. The immense activity of this subjective current, the large interfusion of Inference in the simplest acts of Perception, has long been recognised; and, as I have said elsewhere, what is called a 'fact' and held to be indisputable because it is a 'fact,' is in reality a bundle of inferences, some or all of which may be false, tied together by sensations, which must be true. Take a case so simple as the sight of an apple on the table. All that is here directly certified by consciousness is the sensation of a coloured surface; with this are linked certain ideas of roundness, firmness, sweetness, and fragrance, which were once sensations, and are now recalled by this of colour; and the whole group of actual and inferred sensations clusters into the fact which is expressed in 'there is an apple.' Yet any one of these inferences may be erroneous. The coloured object may be the imitation of an apple in wood or stone; the inferences of roundness and solidity would then be correct, those of sweetness and fragrance erroneous; the statement of fact would be false. Or the object seen may be another kind of fruit, resembling an apple, yet in important particulars differing from it. Or the object may not exist, and our perception may be an hallucination. Thus a case seemingly so simple may furnish us with the evidence that Facts express our conception of the order in external things, and not the unadulterated order itself. Should the accuracy of any particular fact happen to be of importance—and in Science all facts are important—we must verify it, before accepting it. How is it verified? By *submitting each of its constituent inferences to the primordial test of Consciousness*. The test with regard to objects within

range of sense is obviously the reduction of Inference to Sensation. The test with regard to axioms, or general principles transcending sense, is conformity with the laws of thought; when we have thus verified a fact we have attained the highest degree of certitude.

The mental vision by which in Perception we see the *unapparent* details—i. e. by which sensations formerly co-existing with the one now affecting us are reinstated under the form of ideas, which represent the objects—is a process closely allied to Ratiocination, which also presents an *ideal series* such as, if the objects were before us, would be a series of sensations, or perceptions. A chain of reasoning is a chain of inferences, which are *ideal presentations* of the details now *unapparent to sense*. Could we realise all the links in this chain, by placing the objects in their actual order as a visible series, the chain of reasoning would be a succession of perceptions, and would cease to be called reasoning. The path of the planets is seen by reason to be an ellipse; it would be perceived as a fact if we were in a proper position, and endowed with the requisite instruments to enable us to follow the planet in its course. Not having this advantage, we infer the unapparent points in its course, from those which are apparent. We see them mentally. In like manner, suppose a human body is discovered under conditions which suggest that it has been burned, but without sufficient indication of the cause, i. e. the facts antecedent to the burning. Some one suggests that these unapparent facts are those of Spontaneous Combustion. Our greater familiarity with the facts of combustion in general, and with the facts of the animal organism, enables us to see that this explanation is absurd; we mentally range the supposed objects before us, and see that *such* an order of co-existences and successions is in contradiction to all experience; we cannot see what the actual order was, but see clearly that it was not *that*.

Correct reasoning is the ideal assemblage of objects in their true relations of co-existence and succession. It is see-

ing with the mind's eye. Bad reasoning results from overlooking either some of the objects, or their relations; some links are dropped, and the gap is filled up from another series. Thus the traveller *sees* a highwayman, where there is truly no more than a sign-post in the twilight; and a philosopher, in the twilight of knowledge, *sees* a pestilence foreshadowed by an eclipse.

These considerations may elucidate the real meaning to be assigned to Facts, which are sometimes taken to express the order of external things, and sometimes our conception of that order—our *description* of it; just as sound means both the vibrations of the air, and our sensation of them. There is a general tendency to use the word Fact for a final truth. 'This is a fact not a theory' means, 'this is an indisputable truth, not a disputable *view* of the truth.' But if, as we have seen, Facts are inextricably mingled with Inferences, and if both Perception and Reasoning are processes of *mental vision reinstating unapparent details*, and liable to error in the inferences, it is clear that the radical antithesis is not between Fact and Theory, but between *verified and unverified Inferences*.

The antithesis between Fact and Theory is untenable, for the same statement may be either a fact or a theory, without any change in its evidence. It is a fact that the earth is globular. It is a fact that this globe is an oblate spheroid. It is a fact that its orbit is elliptical. No one doubts that these are facts, no one doubts that they are theories. Shall we say that they were theories until they were verified, when they became facts? This will not extricate us; since all facts require verification before they are admitted as truths; up to that point they are not less inferential than theories.

I see an apple now falling, and I see an apple which has fallen. These are two facts which ordinary language will not suffer us to call theories. Now consider two theories which ordinary language suffers us to call facts: namely, that all apples when unsupported will fall, and that the spaces fallen through will be as the squares of the times. These

are two theories of extreme generality, which are far more indisputable than the facts we have contrasted them with. They carry such certainty that no mind having the requisite preparation can for a moment hesitate in assenting to them. They are inferences which are necessities. Whereas the inferences involved in the facts before named may very easily be erroneous. The falling object may not be an apple; the apple found at the foot of the tree may not have fallen, but have been plucked and placed there. Thus doubt is permissible; and if the facts carried any importance we should be bound to verify the accuracy of our inferences. No doubt is permissible in respect to the two theories, because the inferences on which they rest have already been rigorously verified. They carry none of those possibilities of error which we know may be carried by individual experiences; all such possibilities have been eliminated in the establishment of the general truth. Should any individual experience seem in contradiction with a thoroughly verified theory, should a hundred individual experiences contradict it, our confidence would suffer no disturbance; we should at once assign them to the interference of some *condition not included in the formula*. That condition might be wholly undiscoverable, but we should be certain that the laws of nature were invariable; and our experience of disturbing influences is sufficiently extensive to invoke them in every apparent exception to a law. If it happened that two magnets placed side by side impressed on a particle of iron a velocity greater, or less, than the sum of the velocity due to each magnet acting separately, and if this were to occur a thousand times, we should not doubt the truth of the law that the velocity is proportional to the force, but should attribute this exception to some exceptional condition, such as the influence of one magnet on the other. The reason is simple: the law has been rigorously verified; the absence of any exceptional condition has not been verified, whereas the presence of such a condition is suggested by manifold experiences in analogous cases.

Failing thus to discover any valid antithesis between Fact and Theory, we must look upon the ordinary distinction as simply verbal. Shall we express it by the terms Description and Explanation, implying that a Fact describes the order of phenomena, and a Theory interprets that order? For many purposes this would suffice. Yet on examination we shall find that an Explanation is only a fuller Description: more details are introduced, greater precision is given, the links in the chain which are unapparent to sense, are made apparent to reason; but the essential mystery is untouched; successions are enumerated, but causation escapes. Thus in the description of falling bodies, greater fulness and precision of detail are given when the unapparent links are added, and the law of gravitation is introduced as the explanation. In like manner the description of an event, say the destruction of a house by a fire, acquires greater fulness and precision of detail when the apparent details are completed by some eyewitness who saw the fire break out, and explains it by this enumeration of details. In each case the objects are ranged in their order, and are *seen* thus; but in each case many objects are not seen, many intermediate links are overlooked, or are undiscoverable; and the causal nexus is for ever undiscoverable. Thus it is that explanations are descriptions, and descriptions are explanations, facts are theories, and theories facts. Science is the explanation of nature; the systematic co-ordination of the facts of co-existence and succession.

§ 16. In the preceding paragraphs we have vindicated the necessity of the subjective current, and its dangers. The weakness of the Subjective Method is its impossibility of applying Verification; whereas the security of the Objective Method lies in its vigilant Verification. In both the mind has to supply the *formal* elements; in both it has to link together sensations by inferences, and to classify objects according to inferred relations. But the Objective Method simply co-ordinates the materials furnished by Experience; it introduces no new materials; or if it admits them, it does

so provisionally and hypothetically; they are not accepted as real objects until their reality has been otherwise established. Whereas the Subjective Method is perpetually overstepping the limits that divide the material from the formal; its tendency is to confound concepts with percepts, ideas with objects, conjectures with realities. It commits the fault of drawing *material* from the Subject, instead of drawing only *form*. It takes up an inference and treats it as a fact, and thus gives its own fictions the character of reality. Because it cannot apply Verification it assumes that the order of ideas must correspond with the external order if no disorder (contradiction) be displayed. Hence it is that metaphysical conclusions are sometimes so audaciously at variance with what is known of the external order.*

§ 17. The Objective Method is incapable of reaching any results without the large employment of Inference, the successive steps of discovery being Observation, Hypothesis, and Verification. It is distinguished from the Subjective Method, not by its *aim*, which is in both that of co-ordinating the relations of objects, but by its principle of seeking the relations in the order of the objects themselves, instead of in the order of our ideas: submitting therefore every Inference to the control of Verification, and refusing to accept a conjecture as a fact until it has been tested by confrontation with the external order. The cardinal distinction between Metaphysics and Science lies in Method, not in the nature of their topics; and the proof of this is exemplified in the fact that a theory may be transferred from Metaphysics to Science simply by the addition of a verifiable element; or, conversely, may be transferred from Science to Metaphysics by the withdrawal of this same verifiable element. Thus the law of gravitation is a scientific theory; but if we withdraw from it the verifiable formula 'inversely as the

* HEGEL, for instance, bases his system on Contradiction. So far from admitting that a thing cannot be the contrary of that which it is, he affirms, as a fundamental principle, that 'everything is at once that which it is and the contrary of that which it is.'

square of the distance and directly as the mass,⁵ there remains only the occult Attraction,—which is metaphysical. On the other hand, if to a metaphysical theory of gravitation, which explains the phenomena by Attraction or an 'inherent virtue,' we add the verifiable formula of its mode of action, the purely subjective conception passes at once into the objective region, and a scientific theory results.

§ 18. In the course of this History we shall be incessantly witnessing the disastrous effects of transporting the *formal* elements of knowledge into the region of *material* elements—'realising abstractions,' as it is called—and deducing conclusions from unverified inferences as if they had been verified. We shall witness the efforts of philosophers to interpret the external order by the internal order, animating Nature with human tendencies, interpreting *motors* by *motives*. Thus because we derive our conceptions of Force and Cause from our own efforts and volitions, we interpret the changes seen without us by the changes felt within us. This is the source of the Fetichism of children and savages; of the Polytheism of early nations; and, by a gradual refinement in abstraction, of the Metaphysics and Physics of philosophers. Causes are first personified; next raised into Deities; then, by gradual elimination of the personal qualities, transformed into Entities; and finally resolved into Forces, which are exponents of relations. Thus first disappears the Will, next the independent existence; and what finally remains is an *abstract expression of the observed order*.

§ 19. To make the two Methods more readily appreciable by exhibiting them in operation, I will select an imaginary case and two real cases.

From a country where clocks are unknown, even by tradition, two travellers arrive, and in the kitchen of the cottage where they are first received they observe with astonishment an eight-day clock. The phenomena it presents are so novel that our travellers at once begin attempting an explanation. Now all explanation consists in bringing the unknown facts

under certain general facts already known; only by finding what the unknown is *like*, can it be classed and known. In the present case the new phenomena resemble certain phenomena observed in animals. Hence the first rough approximation to an explanation is the conjecture that the clock must be alive. Suppose one of the travellers to be uncultivated, and still in the fetichistic stage, he will at once conclude from his conjecture that the clock is a fetich, and is inhabited by a good or evil Spirit. Let us, however, suppose him to have emerged from the primitive stage of intellectual development, and to have become a thoughtful metaphysician. His companion we will suppose to have been trained in Science and its methods. Both start from the spontaneous hypothesis that the clock is alive, this being the conjecture which most naturally ranges the new phenomena under known phenomena. Let us now watch their procedure.

A is a subjective philosopher, and, not aware of the absolute necessity of verifying his hypothesis, proceeds to apply it, and to deduce explanations of the clock phenomena from the known facts of animal life. The ticking resembles the regular sounds of breathing; the beating of the pendulum is like the beating of the heart; the slow movements of the hands are they not movements of feelers in search of food? the striking of the hours are they not cries of pain or expressions of anger? If the hours are struck just as he approaches the clock to examine it, or has laid hold of it, the coincidence easily suggests rage or terror as the cause; and he having once formed that conception, all subsequent experience of the clock striking when he is at a distance from it, or when no one is in the kitchen, will fail to shake it, but will be accommodated to it by other explanations.

By continuing to observe the phenomena his first rough explanation would gradually be modified, and give place to one more consistent with the facts. A variety of ingenious explanations would occur; but they would all be vitiated by the absence of any verification of the data. He observes a certain periodicity in the recurrence of the cries. There is

a regularity in the succession of these cries—one being always followed by two, and two by three, and so on up to twelve; after which one recurs and two and three in the old order. To his great delight he at last observes a coincidence between each of these cries and the position of the hands on the dial-plate; the longer hand always pointing to twelve, and the shorter hand to the number corresponding with the cries. Hence he properly infers a causal connection; but *what* that is he can only guess; out of several guesses he selects the most plausible. He propounds his explanation to his friend B with perfect confidence in its truth.

B hereupon impatiently points out the treacherous nature of the procedure A has followed. 'My dear fellow, you seem unaware that your starting-point requires strict examination. You assume the vitality of the clock, and having assumed this, you interpret by it the resemblance of ticking to breathing, and of the sounds to cries of pain and anger. But the clock may be alive, and yet these resemblances may be fallacious; they must be verified before they can be accepted; and if the clock is *not* alive? You muddle yourself with Metaphysics, and amuse yourself with drawing deductions, instead of verifying your data. In classing the new facts under old facts it is necessary that we should assure ourselves that the resemblance we imagine is a real resemblance, and springs from similar roots. To effect this, rigorous Analysis is indispensable. But on your Subjective Method there is no analysis of objects, only of ideas. Let me describe the course of my own investigations, guided by that Method which Science has taught me to rely on.

'Like you I conjectured that an animal was before me. What animal? I first perceived that in many respects it was unlike all animals known to me; and pursuing this track I found so many points of unlikeness, and these of such significance in animal life, that *another* conjecture emerged, and I asked, Is it an animal at all? Here were two starting-points, both conjectural, both needing verification. I chose to begin upon the second, and for this reason: if the clock were

not an animal the natural inference was that it must be a machine. I was already familiar with many machines, more so than with organisms, and I began trying how far the observed phenomena could be brought under the known facts of mechanism. Now observe the operation of scientific method! You might have joined with me in forming precisely the same conjectures, but you would have started off at a tangent, and would have deduced from mechanical facts just as you deduced from vital facts, without troubling yourself about Verification. Had I not employed that potent instrument Analysis I should never have discovered the truth about the clock. The complex facts had to be decomposed, and their elements ascertained. As this could not (successfully) be done by analysis of my ideas, I had no alternative but to take the clock to pieces, bit by bit, in the search after the objective condition of each element in this complex whole. I removed the dial-plate, then the back, finally the whole external case; but still the pendulum swung, still the sounds regularly succeeded. Accidentally arresting the pendulum, I found that all the phenomena disappeared; restoring its swing, I restored the phenomena. After repeating this often enough to eliminate all possibilities of coincidence I came to the conclusion that the clock-phenomena were dependent on the motion of the pendulum. This was one step, and an important one; but it was no explanation. There were two questions still to be answered: What makes the pendulum move in this manner? and how does its motion effect the observed results? Had I been deprived of the means of objective analysis, unable to take the clock to pieces, I should have been reduced to your procedure—ingenious guessing. But Observation having disclosed the ascent of one weight and descent of another, I conjectured that this motion was connected with the striking of the hours: I verified it by pulling the descending weight, and I found that, as I pulled, the hands revolved, and the sounds, previously heard at long intervals, now rapidly succeeded each other. Having laid bare the interior I could

trace the action of each part of the mechanism. I found that each beat of the pendulum detached one tooth of a wheel, and thus liberated the arrested movement of that wheel. I observed that these liberations were pulses coinciding with the tickings, and that the movements of the hands coincided with these movements of the wheel, every sixty revolutions of the wheel coinciding with each stroke of the clock. Having thus *explained* the mechanism I rejected the idea of the clock being an organism, as a needless and unacceptable hypothesis. I found that it resembles other mechanisms in all its essential characters, whereas it wants the primary character of an organism, that of drawing its force from Nutrition.'

§ 20. Even those who may object that our scientific traveller has too obviously the advantage in this illustration will admit that the two procedures are characteristically opposed. It is in taking an object to pieces by Analysis, either real or ideal, that we learn to estimate its elements and thus to estimate the whole. The Subjective Method deduces the elements from the whole; and it is confirmed in this procedure by the success of Deductive Science. There is, however, a vital distinction between the Deductive Method and the Subjective Method, and it is this: in the former both data and conclusions are verified by confrontation with the external order. If truth is the correspondence between the order of ideas and the order of phenomena, the only right Method must be that which step by step assures the correspondence, demonstrating that the order of our ideas is also that of the phenomena they represent.

§ 21. I have still to exemplify the operation of the rival Methods by two cases that have not the drawback which may attach to imaginary illustration. The first shall be borrowed from Broussais, in his contrast of Brown's system with his own:—

A survey of the phenomena of life led both to the general conception of Excitation as the constant condition of all vital phenomena, and therefore as a compendious expression which resumed the general facts. Up to this point both

followed the Objective Method. *From this point the divergence was great: 'Nous professons d'abord avec Brown, que la vie ne s'entretient que par l'excitation. Mais nous abandonnons aussitôt cet auteur, parce qu'il prend la voie de l'abstraction en dissertant toujours sur l'excitation considérée en elle-même; nous aimons mieux étudier ce phénomène dans les organes et dans les tissus qui les composent, ou plutôt observer les organes et les tissus excités.'**

§ 22. Our second illustration shall be taken from the instructive though deplorable hypothesis of Spirit-rapping, which is an indelible disgrace to the education of our age.

A few persons stand round a table, gently resting their hands on it, but careful not to push in any direction. In a little while the table moves, at first slowly, afterwards with growing velocity. The persons are all of the highest respectability, above suspicion of wilful deceit. The phenomenon is so unexpected, so unprecedented, that an explanation is imperiously demanded. In presence of unusual phenomena, men are unable to remain without some explanation which shall render intelligible to them how the unusual event is produced. They are spectators merely; condemned to witness the event, unable to penetrate directly into its causes, unable to get behind the scenes and *see* the strings which move the puppets, they *guess* at what they cannot see. Man is *interprès Nature*. Whether he be metaphysician or man of science, his starting-point is the same; and they are in error who say that the metaphysician differs from the man of science in drawing his explanation from the recesses of his own mind in lieu of drawing it from the observation of facts. Both observe facts, and both draw their interpretations from their own minds. Nay, as we have seen, there is necessarily, even in the most familiar fact, the annexation of mental inference—some formal element added by the mind, suggested by, but not given in, the immediate observation. Facts are the registration of direct observation and direct inference, congeries of particulars partly sensa-

* BROUSSAIS: *De l'Irritation*, 2nd ed. 1839, i. 55.

tional, partly ideal. The scientific value of facts depends on the validity of the inferences bound up with them; and hence the profound truth of Cullen's paradox, that there are more false facts than false theories current.

The facts comprised in the phenomenon of 'Table-turning' are by no means so simple as they have been represented. Let us, however, reserve all criticism, and fix our attention solely on the phenomenon, which, expressed in rigorous terms, amounts to this:—the table turns; the cause of its turning is unknown. To explain this, one class of metaphysical minds refers it to the agency of an unseen Spirit. Connecting the spiritual manifestation with others which have been narrated to him, the interpreter finds no difficulty in believing that a Spirit moved the table; for 'the movement assuredly issued from no human agency;' the respectable witnesses 'declared they did not push.' Unless the table moved itself, therefore, his conclusion must be that it was moved by a Spirit.

Minds of another class give another explanation, one equally metaphysical, although its advocates scornfully reject the spiritual hypothesis. These minds are indisposed to admit the existence of Spirits as agents in natural phenomena; but their interpretation, in spite of its employing the language of Science, is as utterly removed from scientific method as the spiritual interpretation they despise. They attribute the phenomenon to Electricity. Connecting this supposed electrical manifestation with some other facts which seem to warrant the belief of nervous action being identical with electricity, they have no hesitation in affirming that electricity streams from the tips of the fingers. It is even suggested by one gentleman that 'the nervous fluid has probably a rotatory action, and a power of throwing off some of its surplus force.' How entirely these ideas of nervous fluid, rotatory power, and surplus force are additions drawn from the imagination and not supplied in the objects, I need scarcely pause to point out.

Each of these explanations has been very widely accepted by the general public. The obvious defect in both lies in

the utter absence of any objective guarantee. We ought to be satisfied with no explanation which is without its valid guarantee. Before we purchase silver spoons we demand to see the mark of Silversmiths' Hall, to be assured that the spoons are silver, and not plated only. The test of the assayer dispels our misgivings. In like manner when the motion of a table is explained by spiritual agency, instead of debating whether the spirit 'bring airs from heaven or blasts from hell,' we let our scepticism fall on the preliminary assumption of the spirit's presence. Prove the presence of the spirit, before you ask us to go further. *If present*, the spirit is perhaps capable of producing this motion of the table; we do not know whether it is, for we know nothing about spirits; at any rate the primary point requiring proof is the presence of the spirit; we cannot permit you to assume such a presence merely to explain such a movement; for if the fact to be explained is sufficient proof of the explanation, we might with equal justice assume that the movement was caused by an invisible dragon who turned the table by the fanning of his awful wings. If it is permissible to draw material from the Subject, and to make such assumption valid as regards objects, our right to assume the dragon is on a par with our right to assume the spirit.

A similar initial error is observable in the electrical hypothesis. Electricity may be a less intrinsically improbable assumption, but its presence requires proof. After that step had been taken, we should require proof that electricity could comport itself with reference to tables and similar bodies in this particular manner. We have various tests for the presence of electricity; various means of ascertaining how it would act upon a table. But seeing that the gentleman who spoke so confidently of 'currents issuing from the tips of the fingers' never once attempted to prove that there *were* currents; and knowing moreover that these currents, if present, would *not* make a table turn, all men of true scientific culture dismissed the explanation with contempt.

Such were the metaphysical explanations of the phenomenon. They are vitiated by their Method. Very different was that pursued by men of science. The object sought was the unknown cause of the table's movement. To reach the unknown we must pass by the Objective Method through the avenues of the known; we must not attempt to reach it through the unknown. Is there any known fact with which this movement can be allied? The first and most obvious suggestion was that the table was pushed by the hands which rested on it. There is a difficulty in the way of this explanation, namely, 'that the persons declare solemnly they did *not* push; and, as persons of the highest respectability, we are bound to believe them.' Is this statement of any value? The whole question is involved in it. But the philosophical mind is very little affected by guarantees of respectability in matters implicating sagacity rather than integrity. The Frenchman assured his friend that the earth did turn round the sun, and offered his *parole d'honneur* as a guarantee; but in the delicate and difficult question of science, *paroles d'honneur* have a quite inappreciable weight. We may therefore set aside the respectability of the witnesses, and, with full confidence in their integrity, estimate the real value of their assertion, which amounts to this: they were *not conscious* of pushing. If we come to examine such a case, we find Physiology in possession of abundant examples of muscular action unaccompanied by distinct consciousness, and some of these examples are very similar to those of the unconscious pushing, which may have turned the table; and we are thus satisfied of three important points:—1. Pushing is an adequate cause, and will serve as well as either the supposed spirit or electricity to explain the movement of the table. 2. Pushing *may* take place without any distinct consciousness on the part of those who push. 3. Expectant attention is known to produce such a state of the muscles as would occasion this unconscious pushing.

Considered therefore as a mere hypothesis, this of unconscious pushing is strictly scientific; it may not be true,

but it has fulfilled the preliminary conditions. Unlike the two hypotheses it opposes, it assumes nothing previously unknown, or not easily demonstrable; every position has been or may be verified; whereas the metaphysicians have not verified one of their positions: they have not proved the presence of their agents, nor have they proved that these agents, if present, would act in the required manner. Of spirit we know nothing, consequently can predicate nothing. Of electricity we know something, but what is known is *not* in accordance with the table-turning hypothesis. Of pushing we know that it can and does turn tables. All then that is required to convert this latter hypothesis into scientific certainty, is to prove the presence of the pushing in this particular case. And it is proved in many ways, positive and negative, as I showed when the phenomenon first became the subject of public investigation. Positive, because if the hands rest on a loose table-cloth, or on substances with perfectly smooth surfaces which will glide easily over the table, the cloth or the substances will move, and not the table. Negative, because if the persons are duly *warned* of their liability to unconscious pushing, and are told to keep vigilant guard over their sensations, they do not move the table, although previously they may have moved it frequently. When we have thus verified the presence of unconscious pushing, all the links in the chain have been verified, and certainty is complete.

§ 23. Reviewing the three explanations which the phenomenon of table-turning called forth, we elicit one characteristic as distinguishing the scientific or Objective Method, namely, the *verification* of each stage in the process, the guaranteeing of each separate point, the cultivated caution of proceeding to the unknown solely through the avenues of the known. The *germinal* difference, then, between the metaphysical and scientific Methods, is not that they draw their explanations from a different source, the one employing Reasoning where the other employs Observation, but that the one is content with an explanation which has no further

guarantee than is given in the logical explanation of the difficulty; whereas the other imperatively demands that every assumption should be treated as provisional, hypothetical, until it has been confronted with fact, tested by acknowledged tests, in a word, *verified*. The guarantee of the metaphysician is purely logical, subjective: it is the *intellectus sibi permissus*; the guarantee of the other is derived from a correspondence of the internal with the external order. As Bacon says, all merely logical explanations are valueless, the subtlety of nature greatly surpassing that of argument: 'Subtilitas naturæ subtilitatem argumentandi multis partibus superat;' and he further says, with his usual felicity, 'Sed axiomata à particularibus ritè et ordine abstracta nova particularia rursus facilè indicant et designant.' It is these 'new particulars' which are reached through those already known, and complete the links of the causal chain.

Open the history of Science at any chapter you will, and its pages will show how all the errors which have gained acceptance gained it because this important principle of verification of particulars was neglected. Incessantly the mind of man leaps forward to 'anticipate' Nature, and is satisfied with such anticipations if they have a logical consistence. When Galen and Aristotle thought that the air circulated in the arteries, causing the pulse to beat, and *cooling* the temperature of the blood, they were content with this plausible anticipation; they did not verify the facts of the air's presence, and its cooling effect; when they said that the 'spirituous blood' nourished the delicate organs, such as the lungs, and the 'venous blood' nourished the coarser organs, such as the liver; when they said that the 'spirit,' which was the purer element of the blood, was formed in the left ventricle, and the venous blood in the right ventricle, they contented themselves with unverified assumptions. In like manner, when in our own day physiologists of eminence maintain that in the organism there is a Vital Force which suspends chemical actions, they content themselves with a metaphysical unverified interpretation of

phenomena. If they came to rigorous confrontation with fact, they would see that so far from chemical action being 'suspended' it is incessantly at work in the organism; the varieties observable being either due to a difference of conditions (which will produce varieties out of the organism), or to the fact that the action is masked by other actions.

§ 24. If the foregoing discussion has carried with it the reader's assent, he will perceive that the distinguishing characteristic of Science is its Method of graduated Verification, and not, as some think, the employment of Induction in lieu of Deduction. All Science is deductive, and deductive in proportion to its separation from ordinary knowledge, and its co-ordination into System. The true antithesis is not between Induction and Deduction, but between verified and unverified cases of Induction and Deduction. The difference between the ancient and modern philosophies lies in the facility with which the one accepted axioms and hypotheses as the basis for its deductions, and the cultivated caution with which the other insists on verifying its axioms and hypotheses before deducing conclusions from them.* We guess as freely as the ancients; but we know that we are guessing; and if we chance to forget it, our rivals quickly remind us that our guess is not evidence. Without guessing, Science would be impossible. We should never discover new islands, did we not often venture seawards with intent to sail beyond the sunset. To find new land, we must often quit sight of land. As Dr. Thomson admirably expresses it:—'Philosophy proceeds upon a system of credit, and if she never advanced beyond her tangible capital, our wealth would not be so enormous as it is.†' While both metaphysician and man of science trade on a system of credit, they do so with profoundly different views of its aid. The metaphysician is a merchant who speculates boldly, but without

* Mr. BAYMA, *Molecular Mechanics*, 1866, p. 3, speaks of those 'modern thinkers who despise the deductive method as a useless relic of the past.' They must be very shallow thinkers who do not see that it is the Subjective, not the Deductive, Method which is the useless relic of the past.

† THOMSON: *Outlines of the Laws of Thought*, p. 312.

that convertible capital which can enable him to meet his engagements. He gives bills, yet has no gold, no goods to answer for them; these bills are not representative of wealth which exists in any warehouse. Magnificent as his speculations seem, the first obstinate creditor who insists on payment makes him bankrupt. The man of science is also a venturesome merchant, but one fully alive to the necessity of solid capital which can on emergency be produced to meet his bills; he knows the risks he runs whenever that amount of capital is exceeded; he knows that bankruptcy awaits him if capital be not forthcoming.

§ 25. Astronomy became a science when men began to seek the unknown through the known, and to interpret celestial phenomena by those laws which were recognised on the surface of the earth. Geology became possible as a science when its principal phenomena were explained by those laws of the action of water, visibly operating in every river, estuary, and bay. Except in the grandeur of its sweep, the mind pursues the same course in the interpretation of geological facts which record the annals of the universe, as in the interpretation of the ordinary incidents of daily life. To read the pages of the great Stone-book, and to perceive from the wet streets that rain has recently fallen, are the same intellectual processes. In the one case the mind traverses immeasurable spaces of time, and infers that the phenomena were produced by causes similar to those which have produced similar phenomena within recent experience; in the other case, the mind similarly infers that the wet streets and swollen gutters have been produced by the same cause we have frequently observed to produce them. Let the inference span with its mighty arch a myriad of years, or span but a few minutes, in each case it rises from the ground of certain familiar indications, and reaches an antecedent known to be capable of producing these indications. Both inferences may be wrong: the wet streets may have been wetted by a water-cart, or by the bursting of a pipe. We cast about for some other indication of rain besides the wetness of the streets and

the turbid rush of gutters, which might equally have been produced by the bursting of a water-pipe. If we see passers-by carrying wet umbrellas, some still held above the head, our inference is strengthened by this indication, that rain, and no other cause, produced the phenomena. In like manner, the geologist casts about for other indications besides those of the subsidence of water, and as they accumulate, his conviction strengthens.

§ 26. While this is the course of Science, the course of Metaphysics is very different. Its inferences start from no well-grounded basis; the arches they throw are not from known fact to unknown fact, but from some unknown to some other unknown. Deductions are drawn from the nature of God, the nature of Spirit, the essences of Things, and from what Reason can postulate. Rising from such mists, the arch so brilliant to look upon is after all a rainbow, not a bridge.

To make his method legitimate, the metaphysician must first prove that a co-ordinate correspondence exists between Nature and his Intuitional Reason,* so that whatever is true of the one must be true of the other. The geologist, for example, proceeds on the assumption that the action of waters was essentially the same millions of years ago as it is in the present day; so that whatever can be positively proved of it *now*, may be confidently asserted of it *then*. He subsequently brings evidence to corroborate his assumption by showing that the assumption is necessary and competent to explain facts not otherwise to be consistently explained. But does the metaphysician stand in a similar position? Does he show any validity in his preliminary assumption? Does he produce any evidence for the existence of a nexus between

* By Intuitional Reason I here wish to express what the Germans call *Vernunft*, which they distinguish from *Verstand*, as Coleridge tried to make Englishmen distinguish between Reason and Understanding. The term Reason is too deeply rooted in our language to be twisted into any new direction; and I hope by the unusual 'Intuitional Reason' to keep the reader's attention alive to the fact that by it is designated the process of the mind engaged in transcendental enquiry.

his Intuitional Reason and those noumena or essences, about which he reasons; does he show the probability of there being such a correspondence between the two, that what is true of the one may be accepted as probable of the other? Nothing of the kind. He assumes that it is so. He assumes, as a preliminary to all Philosophy, that Intuitional Reason is competent to deliver verdicts, even when the evidence is entirely furnished by itself. He assumes that his Intuitions are face to face with Existences, and have consequently immediate knowledge of them. But this immense assumption, this gratuitous begging of the whole question, can only be permitted after a demonstration that the *contrary* assumption must be false. Now it is certain that we can assume the contrary, and assume it on evidence as cogent as that which furnishes his assumption. I can assume that Intuitions are not face to face with Existences; indeed this assumption seems to me by far the most probable; and it is surely as valid as the one it opposes? I call upon the metaphysician to prove the validity of his assumption, or the invalidity of mine. I call upon him for some principle of verification. He may tell me (as in past years the Hegelians used to tell me, not without impatience) that 'Reason must verify itself;' but unhappily Reason has no such power; for if it had, Philosophy would not be disputing about first principles; and when it claims the power, who is to answer for its accuracy, *quis custodiet ipsos custodes*? If Ontology is possible, its only basis rests on the *assumed* correspondence of the external and internal orders, a basis shown by Psychology to be excessively treacherous. If all concepts are reducible to percepts, and our widest generalisations are only Re-presentations of what originally was Presentation, Ontology has no standing place. Its data are figments—subjective constructions in which formal elements are transmuted into material elements, relations are transformed into objects, abstractions are personified and endowed with reality.

§ 27. The objects with which Ontology concerns itself do not admit of Presentation (*Anschauung*), consequently its

conclusions are incapable of being verified. We can never know whether the assumed correspondence between the order in our thoughts and the order in things is a real correspondence. For example, Cause is a concept constructed out of formal elements—an inference which posits the reality of something over and above the unconditional antecedence and sequence given in Experience. Let us admit the reality; we cannot safely proceed beyond the inference; we cannot justify our transformation of this inference into an object having knowable qualities; we are not entitled to found inferences on this inference. Cause then remains a nebulous thought. If we attempt to define it our definitions will be arbitrary; if attempt to deduce from it, our deductions will be figments. Herein lies the distinction between Mathematics and Metaphysics: the one can, and the other cannot, be reduced to Presentation; the one has, and the other has not, an objective basis and a constant verification. The material elements of Mathematics are physical facts gained through Sense; the formal elements are simply serial dispositions of the objects; and thus the widest reaches of mathematical speculation are only the *writing out* of objective knowledge, the development of identical propositions.*

§ 28. Metaphysicians proceed on the assumption that Intuitional Reason, which is independent of Experience, is absolute and final in its guarantee. The validity of its conclusions is self-justified. Hegel boldly says, 'Whatever is rational is real, and whatever is real is rational,—*das Vernünftige ist wirklich und das Wirkliche vernünftig.*' And writers of less metaphysical rigour frequently avow the axiom, and always imply it. Thus in a remarkable article on Sir W. Hamilton, which appeared in the 'Prospective Review,' we read that Philosophy in England has dwindled down to mere Psychology and Logic, whereas its proper business is

* On the contrast between Mathematics and Metaphysics, see the admirable essay of KANT: *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral*; and APELT: *Die Metaphysik*, § 6. Compare MANSEL: *Metaphysics*, p. 285. I have argued the point more fully in the chapter on Spinoza, vol. ii. pp. 211-215.

with the notions of Time, Space, Substance, Soul, God; 'to pronounce upon the validity of these notions as revelations of real Existence, and, if they be reliable, use them as a bridge to cross the chasm from relative Thought to absolute Being. Once safe across, and gazing about it in that realm, the mind stands in presence of the objects of Ontology.'

'Once safe across;' this is indeed the step which constitutes the whole journey; unhappily we have no means of getting safe across; and in this helplessness we had better hold ourselves aloof from the attempt. If a man were to discourse with amplitude of detail and eloquence of conviction respecting the inhabitants of Sirius, setting forth in explicit terms what they were like, what embryonic forms they passed through, what had been the course of their social evolution and what would be its ultimate stage, we should first ask, And pray, Sir, what *evidence* have you for these particulars? what guarantee do you offer for the validity of these conclusions? If he replied that Intuitional Reason assured him these things must be so from the inherent necessities of the case, he having logically evolved these conclusions from the data of Reason; we should suppose him to be either attempting to mystify us, or to be hopelessly insane. Nor would this painful impression be removed by his proceeding to affirm that he never thought of trusting to such fallacious arguments as could be furnished by Observation and Experiment—tests wholly inapplicable to objects so remote from all experience, and accessible only by Reason.

In the present day, speculations on the Metaphysical Method are not, intrinsically, more rational than theories respecting the development of animated beings peopling Sirius; nay, however masked by the ambiguities of language and old familiarities of speculation, the attempt is really less rational, the objects being even less accessible. Psychology has taught us one lesson at least, namely, that we cannot know causes and essences, because Experience is limited to sequences and phenomena. Nothing is gained by despising Experience, and seeking refuge in Intuitional

Reason. The senses may be imperfect channels, but at any rate they are in direct communication with their objects, and are true up to a certain point. The error arising from one sense may be corrected by another; what to the eye appears round, the hand feels to be square. But Intuitional Reason has no such safeguard. It has only itself to correct its own errors. Holding itself aloof from the corroborations of Sense, it is aloof from all possible verification, because it cannot employ the test of confrontation with fact.

This conviction has been growing slowly. It could never have obtained general acceptance until the Metaphysical Method had proved its incapacity by centuries of failure. In the course of our History we shall see the question of Certitude continually forced upon philosophers, always producing a crisis in speculation, although always again eluded by the more eager and impatient intellects. Finally, these repeated crises disengage the majority of minds from so hopeless a pursuit, and set them free to follow Science which *has* Certitude.

§ 29. History with overwhelming evidence proves the incompetence of the Subjective Method; Psychology with irresistible force displays the cause. It is a common mistake to suppose that this Method is followed by metaphysicians exclusively; they, indeed, have uniformly employed it, and were forced by the nature of their enquiries to employ it; but savans unhappily have shown a fatal facility in employing it likewise, and have thereby obstructed the advance of knowledge. All we can say is that only on the Objective Method has Science been successful; because only by the verification of conceptions can Truth—which is the correspondence of the internal and external orders—be reached.

With the validity of the Subjective Method stands or falls the truth of Metaphysics, since that is the Method which alone can be employed in such enquiries. There are three grand divisions of Metaphysics, and these are Psychology, Cosmology, and Theology. It is possible to treat all three

on the Objective Method by restricting them to their corresponding phenomena, and waiving all enquiry into essential causes; but this is Science, and for the present we are dealing with Metaphysics; we will therefore follow Wolf, and adopt the scholastic terms Rational Psychology, Rational Cosmology, and Rational Theology. And as many of my readers will probably be more disposed to accept Mr. Mansel's criticism of these delusive efforts to transcend Experience, than a criticism from the positive point of view, I will here borrow his remarks:—

'The aim of Rational Psychology is to frame definitions exhibiting the essential nature of the soul and its properties, as realities conceived by the intellect, underlying and implied by the phenomena presented in consciousness; and to prove by a demonstrative process that the notions thus defined necessarily flow one from another. Psychology is thus raised from a science of observation to one of demonstration;' [more accurately, from a science of observation to one of inference and deduction from inferences] 'and its objects are transformed from phenomena presented in experience to realities contemplated by the intellect. The soul, by virtue of its essential nature as a simple substance, is shown to possess, of necessity, certain attributes as rationally conceived and defined—such as sense, imagination, intelligence, will, spirituality, indestructibility, and so forth; and the same conclusions are even demonstrated of other spiritual natures which partake of the generic attribute of the soul.' Mr. Mansel hereupon observes:—'The weakness of the whole process is that it tacitly postulates as its starting-point a principle which is neither evident in itself, nor such as can be made evident by any process of thought. It assumes, that is to say, a transcendental definition of the real nature of the soul beyond and above the facts and relations which are manifested in consciousness. But how is the truth of such a definition to be guaranteed? Of the soul as a simple substance, apart from its particular modification, consciousness tells us nothing. How then is the abstract

conception of the nature of the soul to be verified? It cannot be self-evident; for self-evidence is nothing more than the instantaneous assent of consciousness; and the assumption in question cannot be submitted to the judgment of consciousness at all. It cannot be demonstrable; for it could only be demonstrated by the assumption of a higher notion of the same kind, concerning which the same question would then have to be raised. It cannot be generalised from experience; for experience deals with the facts of consciousness only, and tells us not of what *must be*, but only of what *is* or *seems to be*. Unable to verify his fundamental definition by any reference to the reality which it is supposed to represent, the metaphysician is compelled to confine himself to the relations of the language by which it is represented.*

Mr. Mansel then examines Rational Cosmology, showing that it can 'contain nothing more than an analysis of general notions, and can lead to no conclusions but such as the philosopher has himself virtually assumed in his premises. The abstract notion of the world contains implicitly whatever attributes we choose to assume as its constituents; and the metaphysical or logical analysis of that notion can contain no more.'

Still more incisive is his criticism on Rational Theology, which starts from a nominal definition of the Deity. 'How do we know,' he asks, 'that our conception at all corresponds to the nature of the Being whom it professes to represent?'

§ 30. It is the slow rise of the Objective Method and its gradual extension into regions formerly occupied by the Subjective Method which this History will have to exhibit; and the exposition will be twofold, showing the failures of the one Method and the successes of its rival. Thus will be established the conclusion that no problem merits our attention unless its solution is verifiable, and all problems are unverifiable on the Subjective Method.

* MANSSEL: *Metaphysics*, p. 293.

But on what does Verification rest? Before this can be answered it is requisite to discuss the much debated question of the origin of knowledge, Have we any higher source than Experience? Is there a fountain of Truth which springs from a source independent of Experience? I shall have to treat this question by and by, but it is needful first to consider the nature of our Test of Truth.

conception of the nature of the soul to be verified? It cannot be self-evident; for self-evidence is nothing more than the instantaneous assent of consciousness; and the assumption in question cannot be submitted to the judgment of consciousness at all. It cannot be demonstrable; for it could only be demonstrated by the assumption of a higher notion of the same kind, concerning which the same question would then have to be raised. It cannot be generalised from experience; for experience deals with the facts of consciousness only, and tells us not of what *must be*, but only of what *is* or *seems to be*. Unable to verify his fundamental definition by any reference to the reality which it is supposed to represent, the metaphysician is compelled to confine himself to the relations of the language by which it is represented.*

Mr. Mansel then examines Rational Cosmology, showing that it can 'contain nothing more than an analysis of general notions, and can lead to no conclusions but such as the philosopher has himself virtually assumed in his premises. The abstract notion of the world contains implicitly whatever attributes we choose to assume as its constituents; and the metaphysical or logical analysis of that notion can contain no more.'

Still more incisive is his criticism on Rational Theology, which starts from a nominal definition of the Deity. 'How do we know,' he asks, 'that our conception at all corresponds to the nature of the Being whom it professes to represent?'

§ 30. It is the slow rise of the Objective Method and its gradual extension into regions formerly occupied by the Subjective Method which this History will have to exhibit; and the exposition will be twofold, showing the failures of the one Method and the successes of its rival. Thus will be established the conclusion that no problem merits our attention unless its solution is verifiable, and all problems are unverifiable on the Subjective Method.

* MANSEL: *Metaphysics*, p. 293.

But on what does Verification rest? Before this can be answered it is requisite to discuss the much debated question of the origin of knowledge, Have we any higher source than Experience? Is there a fountain of Truth which springs from a source independent of Experience? I shall have to treat this question by and by, but it is needful first to consider the nature of our Test of Truth.

III. THE TEST OF TRUTH.

§ 31. TRUTH being the correspondence between the internal and external order, what is the test of that correspondence? Widely as philosophers differ respecting the origin and scope of knowledge, they are unanimous in affirming that the ultimate test must lie in the verdict of Consciousness, whether the verdicts of Consciousness are, or are not, conformable with Objective Reality. Now Consciousness is a word of delusive vagueness, and moreover some of its 'verdicts' are confessedly false; the question thus arises, Which are certainly true? Metaphysicians implicitly, and sometimes explicitly,* assume that all 'clear and distinct ideas' are true; an assumption which ill accords with the clearness and distinctness of hallucinations, and many false hypotheses. But those who are unprepared for so facile and delusive an answer as this, and who recognise that Consciousness may on occasions deliver false verdicts, desire to fix some criterion of its infallibility, *when it is infallible*.

A startling result discloses itself: Consciousness is only infallible in verdicts limited to identical propositions, or perhaps the better phrase would be propositions of equivalence, e. g. 'A is A,' 'whatever is, is.'† Here, and only here, there is no fallibility. No possibility of error weakens an identical proposition. Unhappily this immunity from error accompanies an infertility of knowledge. It cannot serve as

* As the Cartesians. It is thus boldly stated by TSCHIRNHAUSEN: 'verum est quidquid concipi potest; falsum vero quod non concipi potest.'—*De Medicinâ Mentis*, 1687, quoted by UEBERWEG: *Logik*. This canon receives its full illustration in HEGEL.

† $\chi\rho\eta\ \tau\delta\ \lambda\acute{\epsilon}\gamma\epsilon\iota\nu\ \tau\epsilon\ \nu\omicron\epsilon\iota\nu\ \tau'\ \epsilon\delta\nu\ \epsilon\mu\mu\epsilon\nu\alpha\iota$. PARMENIDES: *FRAGM.* γ. 43.

guidance, for it leads nowhither. Its security is imperilled by the first step in advance; for no sooner is one thing affirmed of another, than, with this commencement of knowledge, fallibility of judgment commences: what is affirmed may be erroneously affirmed; the door has been opened, and error may creep in stealthily, or stalk in imperiously. Our only resource is vigilance: we challenge every object that presents itself, no matter how insignificant its aspect, and force it to declare its quality. This vigilance is Verification, or the ascertainment that every object *is* what it declares itself to be. The famous *principium identitatis* is not indeed a *guide*, but it is a *test*.* Hegel, denying that it is a law of thought (allowing it only as 'a law of the abstract understanding,') affirms that 'no man thinks or speaks according to this law; to say that a planet is a planet and magnetism is magnetism every one holds to be frivolous.'† Perhaps so; and Locke styled such propositions 'frivolous:':‡ nevertheless, the whole stress of Verification consists in reducing propositions to identity or equivalence.

Error arises with Inference, being indeed nothing but the misstatement of the correspondence between what is inferred and what exists. Only two ways of correcting this misstatement are open; and I formerly called them respectively the Real Test and the Ideal Test. The first is a reduction of the inference to a sensation (§ 15). The second is a reduction of the inference to a necessity of thought. Both are reductions to identical or equivalent propositions, which render their negatives unthinkable. The certainty of feeling *as* feeling cannot be disturbed. It is limpid evidence. If I feel cold, I may indeed err as to the external cause of my feeling, but not as to the feeling itself. The markings of a thermometer may assure me that the temperature of my body during an ague-fit is higher than usual; but feeling is

* 'Es ist ein Princip des fixirenden Verstandes, nicht der erzeugenden Anschauung; der festen Ruhe, nicht der flüssigen Bewegung.' TRENDLENBURG: *Logische Untersuchungen*, 1862. ii. 155.

† HEGEL: *Encyclopädie*, § 115.

‡ Comp. MANSEL: *Prolegomena Logica*, p. 191.

its own thermometer, and I am not mistaken in reading its indications when I simply say I *feel* colder, not hotter.

§ 32. This may seem somewhat trite; but if we follow the clue it will lead us to large issues, one of them being the principle that the infallibility of Consciousness in each instance is the impossibility of a negative being thought. No one denies that an identical proposition is irresistible. Even Hegel, who, among other feats of logical legerdemain, showed that 'Every A is at the same time not A,' did not deny that A was A whatever else it might be.

Identical propositions are frivolous when offered as enlargements of knowledge, but not when appealed to as tests of certainty. Condillac, who makes all reasoning consist in a translation of identical propositions, distinguishes between those which are frivolous because their identity is that of terms, and those which are serious because their identity is that of ideas. Thus to say 'six is six,' teaches nothing, being only an iteration of the term; but to say 'three added to three yield six' enlarges knowledge, by disclosing the same ideas under diversity of terms. 'When we judge two men to be of equal size, we see one thing in the two things we compare, that is to say, one size in two men, and we form an identical proposition.'* It would be more correct to say that the identity here disclosed is that of *relation*; the ideas of three and three, and of six, and of man and man are diverse, not identical: the terms 'three and three' and 'six' denote the same relations, connote different ideas. The relations are equivalent.

Our knowledge begins with the discernment of resemblances and differences: it ends in the establishment of *equations*, which are the resemblances abstracted from the differences, and raised into equivalents. At first sight no one would conclude that $2 + 1$ was the same as $4 - 1$: terms and ideas are obviously different; but that an equality exists we easily disclose: thus $2 + 1 = 3$, and $4 - 1 = 3$, and the

* CONDILLAC: *Langue des Calculs*, p. 64. Compare also D'ALEMBERT: *Discours Préliminaire*.

identity becomes visible in the final equation, $3 = 3$.* If I say 'Man is Man,' it is an identical but uninformative proposition, having, however, irresistible certainty, because the negative is unthinkable. If I say 'Man is an Animal,' it is by an equation with abstraction of differences, which may possibly be erroneous and only acquires irresistible force, when an equivalence in the terms Man and Animal is disclosed. That if a force of 7 will produce a velocity of 3, another force of 21 will produce a velocity of 9 is an identical proposition, although the identity has to be disclosed in an equation: we cannot say that the ideas of 7, 21, 3, and 9 are the same; but we say that the relation of 7 to 21 being $\frac{1}{3}$, and the relation of 3 to 9 being also $\frac{1}{3}$, then $3 = 3 = A$ is A. It is in the unfolding of such identities—the exhibition of uniform relations under different signs—that mathematics, and indeed all science, consists. Mr. Herbert Spencer has shown with masterly clearness how the establishment of relations of Likeness is the process of all reasoning—passing from Likeness to Identity, as it passes from qualitative to quantitative reasoning.† And the history of Science is the history of this process, tending towards that goal conceived by D'Alembert when he said, 'L'univers, pour qui saurait l'embrasser d'un seul point de vue, ne serait, s'il est permis de le dire, qu'un fait unique et une grande vérité.' We have already reached the sublime height of regarding all phenomena simply as modifications of each other, capable of being substituted for each other, being, indeed, only different *expressions* of equivalent *relations*, different *signs* of the same *quantities*. This is the grand doctrine of equivalents, which is illustrated in the convertibility of forces. It penetrates beneath the diversities of expression, and searches out the identities of nature.

The establishment of equations through abstraction of differences is the product of all reasoning. When the proposition $A = B$ is first presented, it is by no means an identical

* COMP. DELBŒUF: *Logique scientifique*, p. 127.

† HERBERT SPENCER: *Principles of Psychology*.

one: the obvious diversities in the two terms allow me to infer that the resemblances are by no means so great as to amount to *equivalence*. I can therefore easily think the negative of the proposition. But after repeated demonstration of this equivalence (A being indifferently used for B, and B for A, without variation in the result), the resemblance is seen to be so complete that it amounts to identity, and then the negative is unthinkable. To *establish* identity under variety is the office of Investigation; to *exhibit* it is the office of Proof.

§ 33. It will doubtless have occurred to the reader, that since Consciousness is the ultimate ground of appeal, and since Consciousness can never transcend its own sphere, we cannot possibly have a test of Objective Truth. In one sense this is correct. We never can know more than states of Consciousness, we cannot know Objects *per se*. But to reach the Truth we have no need for deeper knowledge, since Truth is simply *correspondence* between the internal and external order. That correspondence enables us to adjust our actions to external necessities; and we assure ourselves of its accuracy by the certainty of the adjustment. The touchstone of knowledge is *prevision*. I shall shortly have to consider the nature of the proofs which assure us that the subjective order is similar to the objective order; but for the present it is enough to have shown that the subjective test of a Truth is the unthinkable-ness of its negative, in other words, the reduction to A is A.

If this disclosure startles and discomposes the reader, the fault will lie with his exaggerated pretensions to infallible knowledge, which may be regarded as one of the disastrous errors of Philosophy. Instead of being contented with that degree of relative certainty which contents Science, and which permits prevision, and the adjustments consequent on prevision, Philosophy has been restless under the suggestion of doubt, and has required that its positions should not only be impregnable but unassailable. There are many questions beyond the reach of demonstration. The existence of an

external world, for instance, cannot be proved, if the highest degree of probability is rejected as insufficient. This has been declared a scandal to Philosophy; but the scandal lies in the demand for proof—the desire for better bread than can be made of wheat. We should interdict the question from being asked in terms that cannot be answered; it has no claim to be discussed, because the evidence on which it could be decided is not within the compass of human faculty. No astronomer would attend to the sceptic who should maintain that the law of gravitation was only an hypothesis, capable indeed of colligating the facts so that calculations accurately agreed with observation, and prevision was equal to vision, yet nevertheless, *in itself*, the process formulated in the law might be very different. The astronomer would rebuke such purposeless doubt, and would reply that the hypothesis had the highest degree of probability and the highest scientific effectiveness, so long as it was the basis of exact calculation, and received the corroboration of Observation; let a new hypothesis be proposed which exceeds it in reach and in accuracy, and the old one will give way; and not till then. In like manner the hypothesis of an external world carries conviction, and will not be disturbed until proved unsuitable to our needs.

As there is always room for error wherever the proposition is not identical, and as probability of varying degrees is all that can be attained in the majority of our conclusions, it is easy to extend the logical principle which determines infallibility, where error is impossible, to the varying degrees of probability, where error is possible. That which is the logical justification of A is A, namely, the *impossibility* of thinking its negative—is also the justification of a proposition constructed out of complex and remote inferences, which have therefore only more or less probability, *i.e.*, a *difficulty* in admitting its negative. For, what is the meaning of probability? The harmony of a conclusion with other and better established conclusions: the likeness in phenomena to other well-known phenomena. When this likeness is

ascertained to be complete, when the analogy is proved to be an equivalence, then probability gives place to certainty.

§ 34. A formidable opponent must now be met, and his challenge answered, before we can venture to proceed to the second part of this inquiry. That opponent is Mr. Stuart Mill, who, both in his *Logic* and in his work on *Hamilton*, argues at great length against the unthinkableness of a negative as any test at all. He considers it a lingering remnant of Metaphysics; and in his work on *Comte* expresses his surprise at finding Mr. Herbert Spencer and myself in company on this point with metaphysicians. At which we also feel surprised. Mr. Spencer has replied to Mr. Mill in the *Fortnightly Review* (vol. 1. p. 521-550); in the sixth edition of his *Logic*, Mr. Mill has replied to the reply. I shall only touch upon such points as concern my present purpose.

Throughout the discussion Mr. Mill seems to be attacking the supposition that inconceivableness implies non-existence—that what is unthinkable cannot exist. But this does not touch us.

‘Let the galled jade wince:
Our withers are unwrung.’

If Mr. Spencer's language seems occasionally equivocal, the whole scope and spirit of his speculations sufficiently proclaim his restriction of knowledge to relative knowledge, and consequently of every test as relative. He has thus forcibly stated his opinion: ‘Conceding the entire truth of the position that, during any phase of human progress, the ability or inability to form a specific conception wholly depends on the experience men have had; and that, by a widening of their experiences, they may, by-and-by, be enabled to conceive things before inconceivable to them; it may still be argued, that as at any time the best warrant men can have for a belief is the perfect agreement of all pre-existing experience in support of it, it follows that, at any time, the inconceivableness of its negation is the deepest test any belief admits of. Objective facts are ever impressing themselves upon us; our experience is a register of these objective facts; and the inconceivableness

of a thing implies that it is wholly at variance with the register. Even were this all, it is not clear how, if every truth is primarily inductive, any better test of truth could exist. But it must be remembered, that whilst many of these facts impressing themselves upon us are occasional; whilst others, again, are very general; some are universal, and are unchanging. These universal and unchanging facts are, by the hypothesis, certain to establish beliefs of which the negations are inconceivable; whilst the others are not certain to do this; and if they do, subsequent fact will reverse their action. Hence if, after an immense accumulation of experiences, there remain beliefs of which the negations are still inconceivable, most, if not all of them, must correspond to universal objective facts.’

On this Mr. Mill remarks: ‘If our incapacity to conceive the negation of a given supposition is proof of its truth, because proving that our experience has hitherto been uniform in its favour, the real evidence for the supposition is not the inconceivableness, but the uniformity of experience. Now this, which is the substantial and only proof, is directly accessible. We are not obliged to assume it from an incidental consequence. If all past experience is in favour of a belief, let this be stated and the belief openly rested on that ground; after which the question arises, what that fact may be worth as evidence of its truth?’

§ 35. The first remark needful to be made on this controversy is, that since we all three are thoroughly agreed in maintaining Experience and Experience only, to be the ground of knowledge, and the Test of Truth to be necessarily an expression of that Experience, there can be little real opposition between us, in spite of some differences in language. Mr. Mill says, that the evidence for a proposition is the uniformity of Experience; we say the same, and add, that inasmuch as this uniformity renders the negative unthinkable, it is this unthinkableness of the negative which becomes the Test of Truth. No validity is gained in adducing uniformity of Experience, unless there is a warrant

that the experiences which are uniform are themselves beyond question; and this warrant is the unthinkableness of their negation. That some ambiguity will attach itself to the phrase 'unthinkable,' must be admitted: ambiguities are not to be avoided; and they are even more plentiful if we adopt 'uniformity of experience,' for that often fails to express the fact. 'A is A,' does not rest on 'uniformity,' but on intuition. My belief in my feeling as feeling, is as irresistible in one case as after a thousand repetitions. My belief that a body in motion will move for ever, and in a straight line, unless it be influenced by some other body, is a generalisation from Experience, the negative of which is unthinkable as soon as the proposition is clearly apprehended; but it cannot without ambiguity be called an uniformity of Experience, inasmuch as experiences seem momentarily to contradict it, and this seeming contradiction is only reconciled by an *abstraction of the differences*. Moreover, the test of uniformity can never be irresistible, because a possible diversity is not excluded. The test of identity is irresistible, and excludes all possibility of reversal. A is A for evermore. Not only are there many occasions on which the 'unthinkableness of the negative' is a less ambiguous phrase than 'uniformity of Experience,' but, inasmuch as there are two schools in Philosophy, holding different views respecting the origin of knowledge, one school affirming it to be co-extensive with Experience, the other school affirming it to have an additional source antecedent to and independent of Experience, a Test of Truth ought to find its place in both schools: and this place is found by our Test. So long as discussion is confined to concrete questions, 'uniformity of Experience' is as good a test as any; but no sooner does discussion turn upon certain abstract questions, *e.g.*, of Force, than the test of the unthinkable negative resumes its superiority.

Every objection that can be alleged against 'unthinkableness' may equally be alleged against 'uniformity.' That which is unthinkable may turn out to be thinkable, that which has been uniform experience may become diversified.

The examples cited of beliefs once universal and now universally rejected, are examples of mistaken reliance on uniformity, and of unthinkableness rashly concluded where no equivalence had been established, because the elements were not such as then admitted of an equation. It is urged that men once believed the sun to move round the earth, and that, when they did so, 'the contrary was inconceivable;' yet we now know that 'inconceivable' to be true. I answer: When men affirmed that they saw the sun moving from east to west, and revolving round the earth, they affirmed a truth, a subjective, relative truth, indeed, but one which being translateable into an identical proposition, was placed beyond the assaults of scepticism, and must survive all the changes of Science. What was that truth? It was, that they saw the sun moving, *i.e.*, they had certain impressions from certain definite appearances, which followed in a definite order. The fact of their having these impressions was indisputable. How far the actual order corresponded with these impressions, how far their inferences were right or wrong, it was for Science to determine. It did so, by proving that these inferences wanted the character of equivalence on which certainty reposes, and by showing that other inferences gave a more consistent explanation. The belief in the *appearance* of the sun's motion continues, and will for ever continue, for it is a truth the negation of which is unthinkable; but the belief in the *cause* of that appearance, (which is only an inference,) will vary as explanations vary: at each stage the only absolute ground of certainty is the reduction of every inference to sensation or to a necessity of thought; and where this ground cannot be reached, our only ground is *probability*, or such harmony of our explanation with established truths as compels conviction, and thus, for the time, renders the negative if not unthinkable, yet so difficult of acceptance as to be almost equivalent to it. When asked why a man believes that two multiplied by three gives six as the product, the answer is, Because he must, an alternative is impossible, the negative is unthinkable; he has discovered

the equivalence of the relations. If asked why he believes that chemical combinations are uniformly dependent on vibratory calorific actions, the answer likewise will be, Because he must, the negative is unthinkable now that the equivalence of the relations has been exhibited to him. *Before* that exhibition, he would have had no more difficulty in thinking the negative, than he would have had in thinking the product of two multiplied by three was five before he had ascertained that the relations of multiplied numbers were not the relations of added numbers. The numerical identity is seen to be absolute, whereas the identity of heat and affinity may, in the present state of science, be considered as hypothetical. Nevertheless in each case the Test applies.

There are, notoriously, cases of inseparable association determined by the structure of our minds, such as no enlargement of experience could loosen, no subtler analysis dissolve, unless the structure of the mind itself were altered. There are also cases of association which are loosened by the recognition of a mistake in the supposition of identity. We supposed that the thunder was identical with the explosion of wrath, and we associated with it the idea of an angry deity, until the recognised identity of thunder and electricity, severed the association. Finally, it is notorious that our experience, even when uniform, is narrow; so that, when a man affirms anything on the guarantee of its negative being unthinkable, we can disturb his confidence by showing that the negative *is* thinkable, and conformable with a wider experience.

§ 36. Mr. Mill has noticed several of the inevitable ambiguities of language; yet he has not always succeeded in disentangling himself from them; as, for example, in his objection to Mr. Spencer's assertion that when he feels cold he cannot conceive himself not feeling cold. Mr. Mill replies by saying, that he *can* conceive himself not feeling cold; and that he can imagine himself looking into darkness at the very moment that he is actually looking at the sun. The ambiguity of language here permits him to say this, although

all that it lawfully expresses is, that while he looks at the sun he can imagine himself (under *other* conditions) to be looking into darkness; just as it is possible for his thoughts to wander to Nova Zembla while he is sauntering down Regent Street. What Mr. Spencer meant to say was, that during the state of consciousness produced by his looking at the sun, it is impossible for the opposite state of consciousness to emerge; and this Mr. Mill has not answered, nor would he attempt to answer it.

§ 37. This digression ended, we may proceed to the second and more important part of the inquiry: the correspondence of the subjective and objective, as disclosed by our Test.

'Truth relatively to man cannot be defined as consisting in the conformity of knowledge with its object; for to man the object itself exists only as it is known by one faculty or another.* This is the old sceptical position, that the agreement can only be agreement of ideas. Kant adopts it, by affirming that an universal *material* criterion is impossible, because the conception implies a contradiction, but a *formal* criterion is possible, that being simply the agreement of ideas.†

These and other perplexing suggestions are set aside by our regarding Truth as the correspondence between the order of ideas and the order of things; whether ideas are or are not alike, it is enough if their *order* is alike. Here an equation can be established, and certainty found. Whether planets are moved by inhabiting spirits, or are whirled in a sling by some distant spirit, whether they are ellipsoid solids, or unextended centres of force, whether they are in any respect like or unlike our conception of them, is of little consequence to us, so long as we have ascertained the *order* of the phenomena, the law of their motions. So absolute is this abstraction of differences, that we may admit the real law to be different from the law we conceive, provided only that there is equivalence, *i.e.*, that they numerically correspond, so as to admit of calculations which agree with

* MANSEL: *Prolegomena Logica*, p. 241. † KANT: *Logik*. Einleitung, vii.

observation. Hence all that Science needs is correct formulas of the *order* of phenomena: these are truths. How these formulas are reached we have not to consider here; when reached, they are placed by the Test beyond the conflict with doubt.

§ 38. It thus appears that the question which has been debated since the beginning of Philosophy may now receive a decisive answer. This was impossible hitherto, because of the terms in which the question was put. We must no longer seek Truth in the conformity of ideas with objects (which is impossible), nor in the agreement of ideas with ideas (which is a purely subjective condition, carrying no objective validity); we must seek it in the equation of the internal and external orders, abstracting all differences. And the proof of this equation is the corroboration of calculation. When we can employ a formula with absolute precision, using it as if it were identical with the order of things, and applying it to events which are to come, we are certain that this formula expresses equivalence and is a truth.

Subjective agreement is as perfect in hallucination as in perception, which M. Taine happily calls '*une hallucination vraie*.'* How, then, are we ever to be certain that our formulas are true—that the order of our ideas is in correspondence with the order of things? What is the bridge over the gulf between the subject and object? Let us pause awhile to consider.

I am seated in my study, and, on raising my head from a book, see a man slowly pass out of the room, cross the lawn, and seat himself on the garden wall. This has been the order of my sensations. Considered subjectively, the truth is indisputable. It is an identical proposition to say, that I saw what I saw, felt what I felt. But can I with equal certainty say, that what I saw had a corresponding reality, that the objective order was the same as the subjective? Not so. As yet no proof exists. I may have had an hallucination. To prove that my subjective state had its

* TAINÉ: *Les Philosophes Français du XIXième siècle*. 1857.

correspondent objective, some corroboration is needed. My wife enters the room, and she also sees the man on the garden wall. This proves that I have not had an hallucination of vision; but it does not prove the reality of my inference. Her testimony is not final, because she may misinterpret the appearances, as I misinterpret them. A dog comes in, and, seeing the figure on the wall, begins barking furiously. This shows, that although wife and dog may misinterpret the appearances, there is *some* external object. If I could touch it, the corroboration of one sense by another would be valuable; I can, at any rate, speak to it. I do so; and, asking the man what he does there, he replies by some insulting jest. My conviction becomes deepened with each corroborating fact; and when, finally, I order my servant to fetch a policeman, and the policeman comes, and carries off the struggling intruder, the impossibility of my thinking that the vision had not an objective reality is absolute. When all the senses converge, when all the evidences corroborate, we are forced to believe in the objective reality, unless we declare all existence to be a dream.

§ 39. Inasmuch as all knowledge is the expression of Experience, the truth of any proposition respecting things can only be tested by some term of Experience. The elements of Inference must be severally reduced to Feeling, or must be established by Reason. If I cannot reduce an Inference to Feeling, I can approach it through the Feeling of others; and their corroboration is the stronger in proportion as it concerns the objective nature of the thing inferred. I want no evidence of the fact that sugar is sweet to me; but if everyone everywhere declares sugar to be sweet, Reason tells me there must be some objective something corresponding with this sensation; and when I find that this something, which exists in various fruits and various substances, has in all these the same atomic elements, I have got hold of an equation between the internal and external orders.

§ 40. Mr. Mill insists, that a necessity of Thought cannot be accepted as a necessity of Things. Perhaps not; perhaps

it can. We are incompetent to decide. To decide it, would be to have absolute knowledge. Let me ask, why should not a necessity of Thought be sometimes the expression of an equivalent necessity of Things, since it is the product of Experience, which is determined by objective conditions? And even if we grant, that a subjective necessity can never carry with it an objective necessity, we must still say, This is what we are compelled to think, and this for us is Truth. Not that I 'erect the incurable limitation of the human conceptive faculty into laws of the outward universe.' Far from it. I simply erect them into 'laws of the conceptions we form of the universe;' and wherever we find these conceptions so far corresponding with external laws that they enable us to foresee results, and modify phenomena with certainty, we may declare the equivalence of the law and the conception. In such a case, the necessity of Thought is the expression of a necessity of Things. The laws of Number, Form, and Motion are necessities of things no less than of Thought, not perhaps existing objectively in the same forms as they exist subjectively, but having an equivalent order; and the proof is, that we *discover* them in Things, we do not put them there.

§ 41. And this leads me to remark on Mr. Mill's criticism that I 'set up acquired necessities of thought in the minds of one or two generations, as evidence of real necessities in the universe.' Undoubtedly, the laws of Number, Form, and Motion are *discoveries*, and whether these were early or late in being made, nowise affects their truth. Because men, until within the last twenty years, failed to see the equivalence of Heat and Motion, are we to conclude that this equivalence is not a necessity of things? Did not the order in Things proceed on this law (or on a corresponding law) during all the centuries in which men's conceptions of the order were very different? And now that men's conceptions have been readjusted, and they have detected the identity of Heat and Motion, has not the law become a necessity of Thought no less than of Things?

§ 42. What Mr. Mill justly condemns is the tendency to accept necessities of Thought as necessities of Things, *before they have been proved to be identical*. Against this tendency to assume that the order of ideas corresponds with the order in phenomena, and that what is logically valid will always be objectively valid, I have repeatedly protested in the course of this History; for, indeed, the whole body of Metaphysics is a result of that vicious tendency. Nevertheless, believing that Truth is possible—according to the definition I have given of it—and that a correspondence between the internal and external orders, though difficult of attainment, has a decisive Test, I have shown that a proposition is *absolutely true* only when its terms are equivalent, and that as this rests on the impossibility of our thinking a negative of the proposition, the varying degrees of *probability* will depend on the possibility of admitting a negative. This latter condition varies, of course, with the enlargements of knowledge; that negative which was easily thinkable at one epoch becoming unthinkable at another, and that which was unthinkable in the infancy of Science becoming not only thinkable but irresistible in its maturity. That men should be able to stand at the antipodes was formerly quite unthinkable; they were conceived under conditions which would necessitate their falling away into space. Science has not disproved *this* necessity, but has displaced the erroneous conception of the facts on which the proposition rested, and replaced it by another proposition. (Compare § 67.) If we now conclude that men will stand as well on the earth at the antipodes as they stand beside us, it is because we believe the conditions to be equivalent in both places, and, with equivalent conditions, necessarily arise identical results.

§ 43. No one supposes that it will guarantee a truth to say simply that we are compelled to believe it, without exhibiting our grounds of belief.* We must show the evidence to be

* KANT properly objects, that the proposition 'what we cannot but think as true must be true' is no ground of proof, but only a confession of inability. 'Nun giebt es freilich wohl viele unerweisliche Erkenntnisse, allein das Gefühl der Ueber-

irresistible, displaying our belief as a necessary conclusion, not a mere prejudice or tradition. In adducing our evidence, we have to establish a series of identical propositions; and it is precisely because we cannot do this in complex questions, that demonstration halts.

§ 44. We shall have to resume the subject of necessity in a future section, when discussing Necessary Truths in relation to the origin of Knowledge; for the present, therefore, the argument may close. What the preceding paragraphs have attempted to establish is, the possibility of Truth and its Test. This Test is absolute and relative: absolute, when the negative of a proposition is unthinkable because the proposition itself is an identical one; relative, when the negative, though not positively unthinkable, is nevertheless so opposed to existing knowledge as to be inadmissible, in which case the Test only reveals a high degree of probability. But in no case is the Test a means of enlarging knowledge; it only determines the degree of certainty. How knowledge is enlarged we have already seen in the exposition of Method.

zeugung in Ansehung derselben ist ein Geständniss, aber nicht ein Beweisgrund davon, dass sie wahr sind.' *Unters. über die Deutlichkeit der Grundsätze*. Werke, i. 89, ed HARTENSTEIN, 1838. (This is the edition I usually refer to.)

IV. SOME INFIRMITIES OF THOUGHT.

§ 45. If History is Philosophy teaching by example, the examples of infirmity disclosed in the various systems which have gained acceptance should be carefully analysed. I do not propose to enumerate them here, nor to write a treatise on Error, but a few instructive examples may be specified.

And first of that tendency, already noticed, § 16, to commute the formal into material elements, to raise Relations out of their proper category, and transport them into the category of Things. This is the parent of Metaphysics. It is often called the tendency to 'realise abstractions.' Having combined certain elements of particular experiences into a single conception, we treat the concept as if it were an individual object.* The belief in Universals, which was accepted for centuries, is a well-known example. Professor Bain has truly remarked that 'the more we analyse or decompose concrete objects into the abstract qualities that make them up, the more difficult it is to remount to the concrete. Hence the most arduous attempt of all is to make actual nature rise up out of scientific or technical language—to conceive minerals from a book of mineralogy, and the parts of the human body from anatomical description.† Why this difficulty? Because we have to undo what has been laboriously done—to immerse the abstractions in the concretes from which they were

* 'Toutes les fois que certains éléments d'une représentation sont distingués par une analyse, ou groupés systématiquement dans une synthèse, un tout se forme et se pose; rien de mieux; mais on ne s'arrête pas là; on entend que les relations, sous condition desquelles cette opération s'est faite, disparaissent comme l'échafaudage inutile d'une édifice achevée, et que le tout qu'on a constitué demeure à part, debout, comme de lui-même, en lui-même.'—RENOUVIER: *Essais de Critique Générale*, 1854, i. 9.

† BAIN: *The Senses and the Intellect*, 2nd ed. 1864, p. 603.

abstracted. And yet 'this process of resolving natural aggregates into their ultimate abstractions' is the great instrument of Philosophy. These abstracts represent the *constants*; whereas the concretes are the *variables*; and these variables, by their multiplicity and change, confuse the eye and distract the attention. But if, as our infirmity tends, we give objective independence to these abstracts, we distort the order of Things; in other words, we follow the movements of Thought, instead of following the movements of Things.

Now in Science, when pursued on the Objective Method, we are constantly made aware of this tendency, and are forced to correct it by our failures in reconciling calculation with observation; but in Ontology such correction is impossible; accordingly it is in Metaphysics that we see the most frequent exhibitions of the infirmity.

§ 46. A good example of the tendency is the once popular but now gradually expiring doctrine of a Vital Principle.

Life is the connexus of the organic activities: a complex whole of various particular facts, abstracted from those particulars, and raised into objective reality. Each organ is composed of constituent tissues; each tissue has its constituent elements; each element, each tissue has its specific properties; the activity of each organ is the sum of these properties; the organism is the connexus of the whole. Life is thus a concept formed out of particulars. And because the functional relation of each organ to the whole, as of each tissue to each organ, is necessarily dependent on the established connexus, both terms of the relation (parts and whole) being inseparable, some physiologists have argued that the connexus is prior to the organs, the whole *generating* the parts, instead of being a *generalisation* from the parts.

Thus, forgetting the simple teachings of experience that Life is the connexus of various phenomena—an abstract from the phenomena—men have realised the abstraction, declared the *resultant* to be a necessary *antecedent*, and have constructed an Entity out of a Relation. They speak of a Vital Principle anterior to, and independent of, all the organic activities—

a Plastic Force, which mysteriously shapes the elements into tissues, the tissues into organs, the organs into an organism, and which, while thus building up the parts, endows them with its own special property—vitality. 'In the absence of this Principle,' they argue, 'all the activities which could be manifested within a tissue, or an organ, would be chemical and physical, not vital. The presence, therefore, of the Principle is presupposed in every atom of the vital organism; and this presence is not a resultant, but a cause.'

§ 47. Erroneous as this hypothesis seems to most biologists at the present day, it has been strenuously supported, and even still finds eminent supporters. The main source of its persistence lies in the infirmity we are now considering. Because vital phenomena are only observed under a *special* conjunction of conditions, in which the forces (that are elsewhere observed acting in different directions) are seen to have a specific direction impressed on them, we form an abstract of this special conjunction, and then easily fall into the error of realising our abstraction, giving it objective independence. But let us remount to the source of our abstraction. Let us immerse the abstract once more in the concretes from which it was drawn. Let us follow the movements of phenomena, and the illusion will vanish.

A strip of muscle detached from the organism will manifest all its vital properties, so long as its specific constitution as muscle remains, so long as it resists disintegration; it will absorb oxygen, exhale carbonic acid, and contract under appropriate stimulus. A gland removed from the body continues to be a small laboratory of chemical change, secreting as it secreted in the organism. A nerve removed from the body continues to manifest its specific property of Neurility, and will cause a muscle to contract if stimulated; nay, a nerve-centre removed from its connection with the rest of the body will continue to manifest its specific Sensibility; a decapitated bee will sting with its headless body, or bite with its bodiless head.

These phenomena prove that what each part does in the

organism, each part does *out* of the organism. In other words, the Life of the animal is the sum of the particular vital activities;* not a power anterior to, and independent of, these activities. What is Life, if it is not the sum of vital phenomena? And if it is the sum, it cannot be independent of the integers of which it is the sum. The abstract is of course different from any one of its concretes. The organism as a whole—a combination of activities—presents phenomena which cannot be presented by the parts separately. The animal which has its muscles, glands, nerves, and nerve-centres, all harmoniously working together in one body, in one connexus, is capable of manifesting complex phenomena which could not be manifested by any of its separated organs; and the only question that remains is, whether there may not be a Vital Principle which unites these parts into one harmonious whole? Let the question be distinctly stated: Do we mean by Life the *source* of all vital phenomena, or is it simply a personified expression of the phenomena? If the former, then we mean that anterior to all vital phenomena there is a Principle, or Entity, which is in no wise dependent on these phenomena; and on this Principle all phenomena depend, as effects depend, upon their causes.

§ 48. Before considering this aspect of the old doctrine, there is one objection which must be anticipated. Seeing each part of the organism capable of manifesting vitality, the vitalists may claim that fact as peremptory evidence of the truth of their doctrine. 'The parts are alive,' they argue; 'but how alive? They have been *endowed* with vitality by the Principle which forms the organism; not holding it from any virtue in themselves, but receiving it

* 'La force vitale peut être conçue comme une formule laconique destinée à exprimer en un seul mot les caractères propres à la matière organisée.'—BÉCLARD: *Physiologie*, p. 13. 'La vida de la materia es una *funcion*: depende de sus elementos y cada uno de sus elementos depende de los demás y del todo que constituyen. . . . El organismo entero es una funcion de funciones orgánicas, un conjunto que depende de sus partes, no pudiendo perder las todas, sin desaparecer como tal conjunto.'—NIETO SERRANO: *Bosquejo de la Ciencia Viviente*, p. 337.

from the source of all organic activity. Indeed, the conclusive proof of the existence of a Vital Principle is the fact that every atom of the organism is interfused with life.'

I will meet this argument by the simple question: Is the Vital Principle identical with, and coextensive with, the Life manifested by the whole organism, or is it simply the Life manifested by each part? When we speak of a Vital Principle, do we mean the Life of the animal, and is that the same thing as the Life of an isolated muscle, gland, or nerve? Obviously not. In the one we group together various phenomena of sensibility, contractility, nutrition, reproduction, development, and decay. In the other we group together only certain special phenomena. The muscle will contract, will absorb oxygen and exhale carbonic acid; but it will not nourish itself, it will not grow, it will not reproduce other muscles, it will not feel, nor think. If we admit that there is a certain community in all parts of the organism, a community which expresses a fundamental identity, the parts being differentiated from one common mass, we must nevertheless admit the great diversity in the various parts. The organism is the synthesis of these parts, and Life is the synthesis of their properties.

To make this position clearer, let us analyse our knowledge of a locomotive. We find that the fire will heat water out of the machine as in it; the water, when raised to a temperature of 212° F., will pass off into steam; the expansion of this steam will force a piston; the crank will turn a wheel; the wheel will roll a carriage. The skilful adjustment of these various parts results in a whole which we name a locomotive. But no one supposes that the phenomena presented by the locomotive could be presented by any one of its parts. Still less does any one suppose that the phenomena are due to a Locomotive Principle, independent of the parts, which created and adjusted the parts. The engine-maker who adjusted the parts did not give them their properties; he found them, and used them.

Now, the only point in which this parallelism is incom-

plete, is in the community which runs through all the parts of the organism, and is not found in all parts of the machine. As I said before, this arises from the organism being constituted by differentiations of a substance originally homogeneous; whereas the machine is constructed of materials originally heterogeneous. The one was evolved; the other made. If, therefore, the Vital Principle be that which is common to all parts, we shall have to simplify our conception of Life, and reduce it to the properties of a blastema. Eliminating many of the great phenomena of organic activity, we are left with a structureless substance having the properties of Assimilation and Disintegration, from which Development, Reproduction, and Death result. Nor will even this simplification much assist the doctrine of a Vital Principle. Life is only known in dependence on substance; its activity is accelerated or retarded according to the conditions in which the chemical changes of the substance are facilitated or impeded, and it vanishes with the disintegration of the substance. What, therefore, remains, but to conclude that Vitality is the abstract designation of certain *special* properties manifested by matter under certain *special* conditions? Thus conceived, the ascending complexity of vital phenomena with an ascending complexity of organic structure, in harmony with certain special conditions, becomes intelligible, and Vitality distinguishes the simplest living monad no less than the most complex animal organism. Community is thus reconciled with diversity.

§ 49. Metaphysical ghosts cannot be killed, because they cannot be touched; but they may be dispelled by dispelling the twilight in which shadows and solidities are easily confounded. The Vital Principle is an entity of this ghostly kind; and although the daylight has dissipated it, and positive Biology is no longer vexed with its visitations, it nevertheless reappears in another shape in the shadowy region of mystery which surrounds biological and all other questions. I indicated this region of mystery when I said that the organism differed from all other mechanisms in being evolved

from a homogeneous substance, and not made out of heterogeneous substances. How comes this possibility of evolution? Whence the adjustment of part to part, and function to function? If the machine requires a mechanist to dispose and adjust the parts, does not the organism require its mechanist or Plastic Principle?

In presence of this question the metaphysiologist, although he may have given up his belief in an Entity, a Life independent of living substances, has ready recourse to another form of the same belief, and substitutes for the Vital Principle the conception of a Plan or *Scheme*, according to which the physical forces are coerced into an organic unity. The same conception has been applied to the Cosmos. It may be here considered solely in reference to the organism; though students will have no difficulty in extending the argument.

§ 50. At the outset note a false analogy, arising from a misconception of Evolution. We see an architect arranging a plan for a house, and a builder arranging the materials in accordance with this plan. Finding in an organism a certain adjustment of parts, which may be reduced to a plan, we are easily led to conceive that this plan was made before the parts, and that the adjustment was determined by the plan. This is what logicians call *ὑστερον πρότερον*, and ordinary men 'putting the cart before the horse;' the resultant is transformed into the cause.

We not only see that the architect's plan determined the arrangement of materials in the house, but we see why it must have done so, because the materials have no spontaneous tendency to group themselves into houses; that not being a recognised property of bricks, mortar, wood, and glass. But what we know of organic materials is that they *have* this spontaneous tendency to arrange themselves in definite forms; precisely as we see chemical substances arranging themselves in definite forms, without the intervention of any extra-chemical agency.

Observe: either the Plan is independent of the materials, in which case it is an extra-biological agency; or it is the

generalised concept of the indwelling tendencies of matter, when under definite conditions. In the one case the analogy of the architectural Plan is correct; but this destroys the idea of *evolution*, and substitutes that of *construction*. In the other case the analogy is seen to be founded on a misconception of organic facts; the parts with their adjustments *evolve a plan*, and are not *constructed after a plan*. From an observed *nexus* men rashly infer a *nisus*, from an actual conjunction a previous intention. If this conception of a Plan be admitted in Biology, it must equally be admitted in Chemistry, Physics, and Astronomy. Matter and Force not being mysterious enough, we must add a new mystery of architectural Plan, shaping Matter and directing Force. There is, however, this dilemma: Is the Plan in itself a shaping Power? It is then only another name for the Universal Cause. Is it without specific power? It is then an impotent overseer.

§ 51. According to the first answer, the Plan is identified with God. But this introduction of God, besides its pantheistic issues, is an evasion of the real question. We did not ask whether God fashions all things, organisms as well as worlds; but whether each organism and each chemical species has over and above its constituent elements and properties a shaping Idea, an independent Plan, which gives specific direction to the constituent elements and properties? This is the question. There are two answers: 1st, *the teleological*. There must be such a Plan, because our examination of an organism discloses its resemblance to mechanisms which we know to have been constructed on a Plan, and we conclude that each adjustment was intended to effect its purpose. 2nd, *the psychological*. The conception of a Plan, when it does not arise from a false analogy (§ 50), is a generalised expression of the observed facts of organic independence: the facts of a *nexus*. Science finding it indispensable to co-ordinate all the facts in a general concept, such as a Plan, men are led by an infirmity of thought to realise the concept; and having first used it only as a convenient

expression, they grow into a belief of this *nexus* being also a *nisus*.

§ 52. This argument will perhaps be met by the distinction of Potential and Actual, which has played so prominent a part in Metaphysics, and which is itself one of the products of the infirmity now under examination. It will be said 'the Plan pre-exists, not as an actual objective fact, but as a Possibility, a Potentiality.'

Let us first see what experience tells us of the development of an organism. The ovum and the seed are starting points, from which an animal and a plant may, *under requisite conditions*, be developed. This is the expression of our experience. But now observe the jugglery of thought! One of the elements of the whole result, absolutely necessary to the result (indicated by italics in our statement), is quietly eliminated, and never afterwards restored. By a regressive movement of Thought we carry the developed organism back again to its starting-point, (*minus* the conditions of development, therefore,) and form a concept of the ovum and seed as *potentially* containing the animal and the plant.

At first this is mental shorthand, useful as an artifice. Unhappily it soon loses its position as an artifice, and passes into a fallacy. The elements which have been omitted are never restored (compare § 54). If we restore them, if we write out the full meaning of our shorthand notes, what do we read? Assuredly not that the lineaments of the animal are actually present in the ovum. In the ovum they do not exist. When you say that they exist *potentially*, what is the translation of your phrase? It is, that under a given history—under a successive series of particular conditions, a special result will ensue. If we know the conditions and their succession, we may foretell the result. The law of causation determines it. Any variation in any one of the conditions will be followed by a corresponding variation in the result. All this history of development is omitted in the shorthand of Thought. The result is foreseen, because, the conditions being taken for granted, their action is anticipated.

But Nature must not be thus distorted and compressed. If our feeble faculties make artifices necessary, we must not forget that they are artifices; we must restore, in a final elaboration, what, in a preliminary elaboration, we rejected. The facts of Nature remain, whether we reject them or accept them. Potential existence is ideal, not real. If you adjust your rifle accurately, the animal aimed at may be *potentially* dead, but *is* alive; and the merest trifle, the swerving of your hand, or the dampness of your powder, puts an end to the potential existence. A fact is not a fact until it is accomplished. Nothing exists before it exists. This truism is disregarded by those who talk of potential existence. The conception of a plan preceding the execution of a work, does not prove that the plan pre-exists *in re*. The realised plan does not begin to exist, out of Thought, until the work is begun, and is completed with the completion of the work.

§ 52. Potential existence is subjective only. My forecasts of the results of a history may be true or false. I foresee the result by grouping together the facts which *will be*, with the facts which *are*, and I make one concept of them. In doing so I annihilate history. I transcend the conditions of Time, and the necessities of Causality, and conceive as simultaneously completed, that which in Nature must be successive and graduated. So far well. But if I desire to ascertain the actual facts, I must follow the course of Nature, and restore that history which has been left out of sight. Following the development of the ovum, historically, I observe that not only are certain conditions indispensable, but that every variation in the requisite conditions produces a variation in the result—modifies the structure of the animal, arrests or accelerates its development. If I varnish the shell of an egg, I prevent the embryo from developing into a bird. If I varnish one part of the shell, I so alter the requisite conditions that the result is a bird incapable of living, or curiously malformed. In altering the history I have changed the historical result. What then has the Plan effected? The Plan has not come into existence. If the conjunction has thus altered with the altered conditions, how can it be the fulfilment of a Plan

irrespective of conditions? and a Plan which is strictly dependent on conditions is not a *nisus* but a *nexus*. The inevitable conclusion is, that Plan neither shapes the Organism nor determines the conditions through which the development takes place. In mathematical phrase, the Plan is the *function* of Development and Developing Conditions, and is variable with every variation of either.*

The fallacy that a concept has independent existence prior to the particulars out of which it is formed, or that a Plan exists as a potential before it exists as an actual, will frequently be met with in the History of Philosophy. Indeed, Aristotle's distinction of *δυνάμις* and *ἐνέργεια* (see vol. i. p. 313) was for centuries regarded as a luminous guide.

§ 53. An infirmity closely connected with the foregoing, is forgetfulness of the necessity we are under of dislocating the order of Nature, by Analysis and Abstraction; which artifice, since it leads to discovery, may be copiously used on condition of our remembering that it is an artifice, and that the order we have dislocated must be finally restored, if the order in Thought is to correspond with the order in Things.

Science is distinguished from Common Knowledge by its wider reach and more systematic structure, and also by its conscious employment of artifices which our infirmity renders indispensable, and which the unscientific mind employs unconsciously. Abstraction is one of the necessary artifices of research; and the man of science is conscious of what he is doing when he abstracts certain phenomena from the mass presented to him, and proceeds to deal with those abstractions as if they were the whole reality. Ordinary men do the same, but are unconscious of doing it.

* NIETO SERRANO is worth citing on this question of potentiality: 'Es, pues, la fuerza potencial una fuerza que no es tal fuerza, pero que puede serlo; es la posibilidad sobrepuesta por la inteligencia á todo orden determinado. Mas la posibilidad no es absoluta, no es una indiferencia completa respecto del porvenir: esta indiferencia se halla limitada por los hechos, por las fuerzas actuales, por las que aparecen en la totalidad presente, como presentes ó como pasadas, y semejante limitación constituye una probabilidad, que determina de algun modo la potencia.' *Dos uejo de la Ciencia Viviente*, p. 269.

Why must we make this preliminary abstraction—why deviate thus from the actual facts, in order to understand the facts we falsify? The answer is simple. Unless some such simplification be made, all search will be hopelessly baffled by the complexity of phenomena. The parrots of Bacon chatter about Observation; but Observation of cases, however patient and prolonged, will never suffice to disclose the Laws which are enveloped in the cases, and which form the real aim of Science. And what are Laws? They are the constants in phenomena, and can only be separated from the perturbations, due to other Laws, by a process of abstraction which sets aside all the variable accidents and individual peculiarities accompanying and determining each special case. Let us have Observation, by all means; but of what? Of ore and dross together? or of ore and dross separated? The constants found in every case must be separated from the variables found in varying cases. The mineralogist separates the ore from the dross; and the philosopher separates the constants from the variables. Even the Laws of Motion and Gravitation, universal as they are, could never have been discovered by observation of cases of motion and gravity; a preliminary abstraction eliminated all consideration of the variable resistances. The Laws of chemical affinity could never have been disclosed to Observation, except by a preliminary Analysis, which tore one element away from another, and studied each separately.

Every one knows, that unless Kepler and Newton had boldly disregarded all consideration of planetary perturbations, which were nevertheless essential facts in planetary movements, they would have been unable to detect the planetary Laws. But this preliminary falsification was rectified by their successors, who deduced the perturbations from secondary gravitations. It is this twofold process which I propose to erect into a logical canon applicable in all inductive inquiry,* the Canon of Restitution:—

* Compare AUGUSTE COMTE: *Synthèse Subjective*, p. 604. Some time after this Canon with its illustrations had appeared in the *Fortnightly Review*, I found this

§ 54. Every investigation requires for its completion that Analysis be succeeded by Synthesis, *i.e.*, the preliminary abstractions be succeeded by a restoration of the rejected elements, so that the synthesis be made to correspond with reality.

In establishing the Laws of Mechanics philosophers falsify the facts to the extent of assuming that the lines of direction are undisturbed, and that the materials are perfect. In reality, this is never so; and the practical mechanic has to rectify the rational Law by the restitution of the discarded elements. His action is synthetical, and his calculations must be so likewise. At peril of ignoble failure, he has to ascertain what are the actual lines of direction, as determined by the rational Law *and* the perturbing resistances; he has also to ascertain to what extent the materials are uniform.

§ 55. Two illustrations will suffice to exhibit the neglect of this canon. The undulatory theory, of light and heat, is justly regarded among the triumphs of modern science. It starts from oscillating atoms having no dimensions—mere mathematical points. This is a bold disregard of concrete observation; points without form or size are abstractions so entirely removed from reality as to be unimaginable. Nevertheless, Analysis occupied solely with oscillations, and discarding the oscillating atoms, as if they were not elements of the synthesis, has furnished Laws of vibration that explain many of the most remarkable phenomena of light and heat, *e.g.*, polarization, refraction, interference. This success

passage in COMTE's *Politique Positive*, vol. i. p. 426: 'Les événements ne pouvant s'étudier que dans des êtres, il faut écarter les circonstances propres à chaque cas pour y saisir la loi commune. C'est ainsi, par exemple, que nous ignorerions encore les lois dynamiques de la pesanteur si nous n'avions pas fait d'abord abstraction de la résistance et de l'agitation des milieux. Même, envers les moindres phénomènes nous sommes donc obligés de décomposer pour abstraire avant de pouvoir obtenir cette réduction de la variété à la constance que poursuivent toujours nos saines méditations. Or ces simplifications préalables sans lesquelles la vraie science n'existerait jamais exigent partout des restitutions correspondantes quand il s'agit de prévisions réelles.' Although I had not marked the passage previously, nor realised its full significance, it is highly probable that I was unconsciously guided by it in the construction of the canon.

justifies the falsification. But inasmuch as the theory fails to account for other important phenomena, the Canon of Restitution suggests that the failure may lie in this falsification, and that the outlying elements may furnish a solution of the unexplained difficulties. If the atoms exist at all, it is unthinkable that they should not have certain geometric properties, and these geometric properties entail dynamic properties. If they have Form, they must have a corresponding Movement. As it is impossible to conceive them unextended, as they must have size and form, they must have the motions deducible therefrom. But these facts have hitherto been disregarded. Let them be restored, and let mathematical analysis be directed to the problem under this new aspect. The movement of the wave, *i.e.*, the movement of translation, has been sufficiently analysed; now let the movement of the atom, *i.e.*, the movement of rotation, according to Poincaré's immortal principles, be investigated. In the mechanics of translation the form of a body is indifferent, but in the mechanics of rotation the form is everything. If the investigation in this direction failed to clear up the present difficulties, it would at least have this result, that it would prove the rotation of the atoms to be legitimately disregarded in the theory of Light and Heat, because not sensible factors in the result.

§ 56. The second illustration of our Canon shall be the question of the Origin of Species.

Are Species variable or invariable? This question resembles that of planetary perturbation. The abstract Law of Reproduction—that Like produces Like—is unassailable as a Rational Law; and it points to the fixity of Species as a fundamental truth. But the Law is Rational, not Natural. It abstracts the Organism from the Medium—one factor from its co-efficient—and thus violates the synthesis of Nature, which never yet presented an Organism independent of the Medium in which it lived. And there is matter for meditation in the fact, that only in modern Biology has the necessary reaction of the Medium been steadily conceived as

one of the necessary elements of every biological problem; formerly the Organism was always conceived as if it were no less independent really than it was ideally.

The restitution of the discarded elements, namely, the reaction of the Medium and the Struggle for Existence, which act as perturbations of the biological Law, bring forward this problem: What is the sweep of the perturbations? Can these perturbations be assigned to some secondary biological Law (the reaction of the Medium), and can they, by accumulation, determine a change in the primary Law?

At present we have two groups of thinkers, each relying on a group of indisputable facts: one proves the constancy of forms, and another proves the variability of forms. The complete theory must include and reconcile both groups. For this it is necessary that a rational Biology should elaborate a theory of the Organism, and a theory of the Medium; then the Law of Reproduction being completed by the restitution of the Perturbations, also reduced to Law, we shall have a possible synthesis explaining all the cases.

§ 57. The Canon just exhibited is needful as a corrector of our natural infirmity, which first makes the separation necessary, and then forgets that the restitution is no less so. The anthropomorphic infirmity, which suffuses Objects with our Feelings, making Cause inseparably associated with Effort, and Attraction with Desire, is too well known to need more than a passing mention here. It is a fertile source of metaphysical speculation.

Another is the strange assumption, that because knowledge is the bringing of the Unknown under the categories of the Known (for only thus can the Unknown be thinkable at all), therefore we can discover the further relations of this Unknown. For instance, Kant, in the preface to the second edition of the *Kritik*, says that Will, the phenomenon, is not free, because it is subject to the laws of phenomena; but Will, the thing in itself, may be thought as free, because no longer subject to the laws of phenomena. Now he admits that things in themselves are beyond knowledge. If we

cannot know the *Dinge an sich*, how can we predicate anything of them? In his *Prolegomena* he has this illustration of analogy: 'I can never do anything to another without thereby giving him the right to do the same under similar conditions; just as no body can act on another without thereby causing an equal reaction on itself. Here Right and Force are two entirely different things, but there is a complete resemblance in their relations. By means of such analysis I can consequently attain conceptions of the relations of things, which things are absolutely unknown to me.'* If the things were absolutely unknown, how could the relations, upon which the analogy is founded, be known?

The fact is, men are constantly affirming certain existences to be Unknown and Unknowable, yet in the same breath affirming relations of them which presuppose knowledge. They will admit that Matter, as *Ding an sich*, is absolutely and necessarily extruded from the sphere of possible knowledge; yet they will proceed to argue that it must, or must not, be constituted of discrete atoms, that these atoms are, or are not, in contact. They will admit that it is impossible for us to know God, otherwise than through Revelation. Yet they have not the slightest misgiving in affirming many things of God's nature, interpreting his intentions, without any warrant in Revelation. Thus implying that they know what they have declared unknowable.

This list of infirmities might be extended, but it may close here. Others will meet us in the History.

* KANT: *Prolegomena zu jeder künftigen Metaphysik*, § 58. Werke, iii. 285.

V. NECESSARY TRUTHS.

§ 58. THE great question which has been debated in the schools respecting the Origin and Limits of Knowledge, has of late years resolved itself very much into a debate respecting the nature of Necessary Truths. The philosophers who hold that, over and above the results of Experience, in its widest acceptance, we have truths of a higher authority and a larger reach, springing from a nobler source, invoke, as decisive evidence of their opinion, the existence of Necessary Truths, which cannot (they affirm) be the results of Experience.

This position rests upon a radical misconception of Experience, and a psychological misconception of the nature of Necessary Truths; both of these mistakes it will be important to clear away. We may admit at the outset, that the mind is in possession of many ideas which could never have been directly given in Experience, if Experience be restricted to Sense. The restriction, however, is unwarranted. Ratiocination is as much an organic function as Sensation. Just as the base line gives the indirect, yet certain, measure of the inaccessible line of the triangle, so from the data of Experience may we measure consequences which are not directly accessible. But the analogy must not be perverted: the base line only gives us the directly inaccessible line, it does not give other lines; the data of Experience only give the directly inaccessible consequences of the data, not the consequences of *other* data; and it is owing to an imperfect appreciation of such limits in the deduction of the unknown from the known, that the doctrine of Necessary Truths, independent of Experience, has attained currency.

§ 59. What is Experience? It is the sum of the actions of Objects on Consciousness; or—to word it differently—the sum of the modifications which arise from the relations of the Sensitive Organism and its environment. In this sum are included—1st, The direct affections of Consciousness in its relations to the outer world; 2nd, The results of those affections through the action of Consciousness in combining, classifying, and transforming the materials furnished by Sense. Thus Experience, in its widest acceptation, is the product of two factors: Sensation and Laws of Consciousness.

So far all thinkers are agreed. The point of separation is this: Are the Laws of Consciousness evolved out of the relations of the Sensitive Organism and its environment; or are they pre-existent, and independent of any such relations? When the empirical school declares its acceptance of the former alternative it seems to proclaim an absurdity—Experience being a product of Sensations and Laws, is said to produce the Laws of which it is the product. But this verbal contradiction is got rid of when we distinguish Experience from experiences. Every particular modification of Consciousness is a particular experience. Each modification prepares the way for successors, and influences them. The Laws are evolved through these successive modifications, and Experience is the general term expressing the sum of these modifications.

But are the Laws evolved? The Sensational School has greatly obscured this question by the unscientific conception of the mind as a *tabula rasa* upon which Things inscribe their characters—a mirror passively reflecting the images of objects. This presupposes that Consciousness is absolved from the universal law of action and reaction, presupposes that the Organism has no movements of its own; and thus Psychology is separated from its only true biological ground. The *à priori* School commits the opposite mistake of conceiving Consciousness as a pure spontaneity, undetermined by the conditions of the Organism and its environment; a spontaneity which brings Laws, not evolved from relations,

and organised as results, but derived from a supra-mundane, supra-vital source.

§ 60. We cannot take a step unless we admit that Consciousness is an active reagent, even in its first stage of evolution. Sensibility is not passive, cannot be conceived otherwise than as an excitation. Nor is this all. Biology teaches that the Sensitive Organism inherits certain aptitudes, as it inherits the structure, of its progenitors; so that the individual may be said to resume the Experience of the race. Faculties grow up in the development of the race. Forms of Thought, which are essential parts of the mechanism of Experience, are evolved, just like the Forms of other vital processes. In fact, as Function is only the Form of activity of an Organ, it is obvious that if the Organ is evolved, the Function is evolved, and with it the Laws of its action.

The *à priori* School denies this, not indeed explicitly, but with energetic implication. It does not boldly affirm that Function can exist without an Organ; but it denies that Consciousness is a Function. Hence it has no difficulty in maintaining that the Mind of an infant is full-formed at birth, equipped with all its faculties, though without those materials of Thought which will afterwards be furnished in Experience. How can this be? The Aristotelian refuge of *potential existence* (§ 52) is ready for the escape of the metaphysician pursued by Fact. To us, who decline that refuge, the assertion that the Mind is full-formed at birth is as rational as the assertion that the infant is born a full-formed man, equipped with all his faculties of locomotion, speech, reproduction, &c. The infant may *become* a man, but *is* an infant, and his mind is undeveloped; if the spiritual experiences of the infant were suddenly arrested, does any one suppose that we should find in them those Fundamental Truths and Forms of Thought which Psychologists declare to be the native dowry of the mind? * I do not know that any one frankly affirms this; but I know that the *à priori*

* Compare the striking passage in MANSEL's *Metaphysics*, p. 45.

School implies it, in maintaining that we have within us a source of knowledge which is not evolved in Experience.

§ 61. Kant is the most potent philosopher of this school, and although in my criticism of the *Kritik* I have had to consider his position, I cannot pass it by here without challenge; referring the reader therefore to what is said, vol. ii., p. 460 and pp. 475 sq., I will here notice only such points as the argument needs.

Kant says, 'There are two branches of knowledge: Sensibility and Understanding—which possibly spring from a common but unknown root. Through the one objects are given, through the other they are thought.* Except for the reservation in the word 'possibly,' this is unimpeachable; but the reservation was dictated by his exaggerated view of the part played by the Subject in the construction of knowledge. He made an entity out of a relation. He thought the subjective element could be separated from the objective; and, thus separated, it would reveal itself as independent of and antecedent to Experience, constituting indeed the very conditions of Experience. I have shown this to be a fallacy. 'The understanding,' he says, 'does not draw its laws (*à priori*) from Nature, but prescribes them to Nature—*schreibt sie dieser vor.*'†

§ 62. The error arises from a false point of view, which mistakes Anatomy for Morphology and Logic for Psychology. Accepting the human understanding in its developed forms, he presents us with these *constituent forms* as if they were *initial conditions*; the results which are developed through successive experiences are presented as the primary conditions of Experience: the generalizations are made antecedent to the particulars from which they are drawn. We are told that these Forms are implied in the particular experiences. Granted: if they were not implied they could not have been elicited. Logic is justified in disregarding the process of

* *Kritik*. Einleitung: sub finem.

† *Prolegomena zu jeder künftigen Metaphysik*, ii. § 36. Compare also his *Anthropologie*, i. § 9.

evolution, content with the result; for Logic has to exhibit the Forms of Thought, not their origin. In like manner Anatomy has to do with the organs of the body, not with their genesis, which belongs to another branch of the science, Morphology. Now the question of Experience is a question of origin; and Psychology reveals that Experience is the self-woven garment of Thought in which every thread is an experience. To assert that *à priori* principles or Forms of Thought render Experience possible, is to assert either that these Forms exist before Thought itself exists, or else it is to confound the general with the particulars. Let us see this in an analogy.

§ 63. The vertebrate type is by some *à priori* thinkers held to be the necessary Form which renders the vertebrate animal possible. Anatomically this is acceptable. But what says Morphology? Does it disclose the existence of a Type anterior to the existence of the animal? or does it not disclose the emergence of the typical Form in the successive phases of the animal's development? Obviously the idea of pre-existences is a figment, a mere *ὑστερον πρότερον* (§ 50).

Again: a frog breathes by means of lungs. The lungs once developed and brought into action become a necessary condition of possible breathing. Ever afterwards the frog's existence is determined by this condition. But if we take the frog in its early stages, we find it breathing by means of gills, the lungs not having yet come into play. At this period it is not a lung-breathing animal; the necessary condition is somewhat different. In the course of development the fore-legs begin to press upon the arteries which supply the gills, and the consequence of this pressure is the gradual disappearance of the gills. Meanwhile the lungs pass from their rudimentary inactive state into an active state, and the disappearing gills are replaced by the emerging lungs. It is thus also with the development of Mind: the necessary conditions which render experiences possible in the early stages are not the same in the later stages. Mind is a successive evolution from experiences, and its laws are the action of

results. The Forms of Thought are developed just as the Forms of an Organism are developed. The infant Newton is no more the author of the *Principia*, than the egg is the game-cock.

Indeed, this notion of *à priori* Forms, connate if not innate, is a violation of the ground-principle of Biology, and consequently, as all but metaphysicians must admit, of Psychology. If there is one lesson taught us everywhere in Biology, it is that nothing which is definitive is primitive—no form characteristic of the developed state is to be found in the germinal state. Therefore, unless we maintain that Mind is, *ab initio*, adult, as to its powers if not as to its Knowledge,—that it does not develop but only appears,—we must admit that with Mind, as with Body, there is not preformation or pre-existence, but evolution and epigenesis.

§ 64. What is it prevents some men from accepting this alternative? It is that they discover in the adult mind principles which cannot, they affirm, be evolved from Experience. Necessity and universality point to an *à priori* source. Necessity is not given in any particular experience. Universality is not given in any number of experiences. Hence—(here lies the fallacy!—) they are not empirical.

We affirm that they belong to Experience, are products of Experience, and of Experience only; they are the results of that movement of Thought which passes from particulars to generals. I shall presently show that they are necessities of Thought under the limitations of Experience. Of course it is requisite to avoid the common confusions on this subject, and not restrict Experience to Sense, as many unwarrantably restrict it. Thus Dr. Thomas Brown repeats the false statement commonly accepted as an axiom, that 'Experience teaches us the past only, not the future.' Is this so? Is it not the fact, that although experiences are only past modifications of Consciousness, they have a forward projection, and hence Experience teaches—whether correctly or falsely—the future irresistibly? Expectation is surely a product of experiences. Association is experience. When a dog, having

once experienced the pain produced by a stick falling swiftly on his ribs, again sees me about to strike him, is there anything over and above his modified consciousness (Experience) which causes him to foresee pain to himself in that preliminary? The metaphysician wants an occult something to give this simple case the requisite obscurity. 'It is not to experience alone,' he says, 'that we must have recourse for the origin of our belief that the future will resemble the past, but to some other principle which converts the simple facts of experience into a general expectation or confidence.'* This is easily said, but Brown is forced to add: 'This principle, since it cannot be derived from Experience itself, which relates only to the past, must be . . . an original principle of our nature.' A very typical example of metaphysical logic! If the 'original principle' mean something born with us, ready to receive our experiences as in a mould, I affirm this to be the *ὑστέρων πρότερον* fallacy. If it mean no more than that our psychical nature is such as to group together phenomena experienced together, so that when once the stick has been coupled with pain, the two ideas are associated, then indeed there is no objection to the phrase, except its mysteriousness.†

§ 65. Having thus defined and explained what is the sense in which Experience is legitimately held, we may address ourselves to the question of Necessary Truths, and see whether they point to a source of knowledge which is superior to, or at least independent of, Experience.

It may be convenient to use the term empirical, as opposed to *à priori*, to designate what is contingent, as opposed to what is necessary. But Kant himself saw that the distinction is only verbal, and in the opening section of the *Kritik* says: 'We are wont to call many conclusions, which have their

* BROWN: *Lectures on the Philosophy of the Mind*, vi.

† 'If we think in relations, and if relations have certain universal forms, it is manifest that such universal forms of relations will become universal forms of our consciousness. And if these further universal forms are thus explicable, it is superfluous, and therefore unphilosophical, to assign them an independent origin.' SPENCER: *First Principles*, p. 229.

source in experience, *à priori*, simply because they are not drawn immediately from experience, but from a general rule, which was, nevertheless, drawn from experience. Thus we say of a man who undermined his house: He might have known *à priori* that the house would fall in, *i.e.*, he need not have waited for the experience of its actual fall. Yet purely *à priori*, this could not have been known, for he must have learnt through experience that bodies are heavy, and fall when their supports are removed.' Nevertheless, although Kant saw this he still believed in the existence of *à priori* principles, which are demonstrably not less empirical. What misled him was, I think, the confusion between contingent Knowledge and contingent Truth. He declared Experience to be empirical and contingent, because our experiences could never be necessary and universal; whereas universal and necessary Truths were *à priori*, because they could not be given in particulars, and hence were *anterior* to all Experience. That they might be *posterior* to (*i.e.*, evolved from) Experience, was an alternative he omitted to consider.

With these preliminary explanations, let us now examine how far the Necessary Truths are, or are not, capable of reduction to Experience.

§ 66. It appears to me, that all writers on this subject have failed to see a distinction which is so obvious when pointed out, that the neglect of it seems inexplicable: the distinction is between the (objective) fact and our (subjective) knowledge of the fact. We speak of sound sometimes meaning the undulation of the air without us, and sometimes meaning the sensation excited within us by that undulation pulsating on our tympanum. By a similar laxity, we speak of a Truth sometimes as the relations of an external fact, and sometimes as the conception we have formed of the fact. Now in the Truths classified as Contingent, the contingency is never applicable to the relations themselves, but solely to our conceptions of them. That 72 and 140 added together will make 212 is a truth which, objectively, has no contingency whatever; but there is a subjective contingency in this as in all other unverified propositions, namely,

the contingency of our miscalculating—misconceiving the objective relations. That 'a body moving under certain conditions *as if* attracted by a force varying inversely as the square of the distance will describe an ellipse having the centre of attraction in one of the foci,' is a proposition which, *once demonstrated*, has no contingency, although we may easily misconceive the relations it expresses; and that 'the earth is a body acted on by such a force under such conditions,' is likewise a proposition which is contingent until verified, and is necessary when verified. Assuming that there is an external world, its order must be necessary, *i.e.*, the relations must be what they are; the contingency can only lie in the correctness or incorrectness of our appreciation of those relations. Hence, instead of confusedly speaking of Necessary and Contingent Truths, it will be less ambiguous to speak of Verified and Unverified Propositions. All truths are true, but all propositions do not correctly express the external relations, and the question arises, which propositions are to be accepted as correctly expressing the relations? Obviously those only which have been verified by the equivalence of the internal and the external order, or the reduction to $A = A$.

Several persons seated at a table are startled by shrill sounds, which they one and all infer to be the shrieks of a child in pain or terror. The fact that they hear the sounds is indisputable, and the expression of this fact is a truth as 'necessary,' as that 'two parallel lines cannot inclose space.' Nor is there any contingency in the fact, that these sounds are produced by pulsations of the air on their tympanum. Why is there none? Simply because experience has found that the sensation of Sound *is* produced in this way—the objective relations have been verified. There is, however, some contingency in the proposition,—'These sounds are caused by a child in terror or in pain;' not that there is the slightest contingency in the fact itself. On proceeding to the spot, the child is found to be struggling with an animal, and shrieking as it struggles. The truth of the proposition is now verified, and unless scepticism be extended so far as to

doubt whether all the phenomena are not the pageantry of a dream, we may affirm that the proposition is a necessary truth.

It may surprise the reader to see an example of this kind cited as a necessary truth, but I have selected it for the very purpose of my argument, which is to prove that the question of contingency lies solely within the region of all unverified propositions. All verified propositions are necessary truths; all unverified propositions are contingent. This is a complete reversal of the position maintained by metaphysicians, for they affirm that necessary truths are precisely those propositions which cannot be verified (*i.e.*, exhibited in Experience), and that all propositions dependent on the verification of Experience are contingent.

§ 67. Let us now take another step. The advocates of Necessity, as an indication of a source of knowledge superior to Experience, are guilty of a confusion so misleading that I am surprised at neither friend nor foe having pointed it out. It is nothing less than *changing one of the terms of the proposition*, and then concluding as if the terms had remained unaltered. Thus the one argument incessantly brought forward is, that some Truths are such as are seen to be not only true, but *necessarily* true; whereas, there are other truths which, however true to-day, are contingent, because changes may occur to-morrow which will reverse them. It is further added, that no amount of experience, no number of examples, can establish necessity, but only the fact of generality, and a life-long experience of uniformity cannot exclude the possibility of a sudden reversal. All that Experience can show is, that a certain order has been uniformly observed; it cannot show that what has always been must always be.* Philosophers have accepted this reasoning as if it were irresistible; every one uses it without suspicion; but no sooner do we ex-

* 'Tous les exemples qui confirment une vérité générale, de quelque nombre qu'ils soient, ne suffisent pas pour établir la nécessité universelle de cette même vérité: car il ne suit pas que ce qui est arrivé arrivera toujours de même.' LEIBNITZ: *Nouveaux Essais*, p. 113.

amine it closely than we find it rests on the unconscious substitution of one premiss for another. To say that 'what has occurred will occur again, will occur always,' is to say that 'under precisely similar conditions precisely similar results will issue.' A is A; and A is A for evermore. But to say that 'what has occurred may probably not occur again, will not occur always,' is to say that 'under *dissimilar* conditions the results will not be similar.' This proposition is as absolutely true as the former; but who does not see that it is a different proposition? When we declare that the laws of Nature are not necessary truths, but only contingent truths, because the mind readily conceives the possibility of their reversal, readily imagines such a change in the external conditions as would arrest the earth's motion, and with it all the manifold phenomena now resulting from that motion, what is it that we have declared? It is that, the relations of phenomena being altered, our conceptions to be true must alter with them. It is that, instead of the proposition, 'Such is the order of Nature, and such it *will be so long as it is unaltered*,' we have silently substituted this proposition: 'Such is *now* the order of Nature, but *if at any time it should be altered*, it will be different.' The only necessity is that a thing is what it is; the only contingency is, that we may be mistaken as to *what* it is. The law of gravitation, or the elliptical orbits of the planets, may, or may not, be truths; but if they *are* truths, they are necessary truths.* To say that they are 'observed facts, nothing more,' is all that is required by Necessity; and when we add that there is no proof of the continuance of the observed order, we either deny that 'A is A,' or we silently change the proposition, and say 'if A be-

* As CONDILLAC puts it: 'En effet, parce qu'on a vu qu'on raisonne mal lorsque, d'un cas particulier, on tire une conclusion générale qui renferme des cas tous différents, on s'est hâté de rejeter toutes les démonstrations, ou l'on conclut du particulier au général; et on n'a pas remarqué qu'il n'y a point de défaut dans une démonstration lorsque dans une conclusion générale on ne comprend que des cas parfaitement semblables à celui qui a été énoncé dans une proposition particulière . . . une propriété qui constitue une proportion arithmétique est donc une propriété qui les constitue toutes; autrement il faudrait supposer qu'il y a des proportions arithmétiques qui ne sont pas des proportions arithmétiques.' *Langue des Calculs*, p. 113.

comes B, it will no longer be A;’ for, if the conditions continue unchanged, the order must necessarily continue unchanged; if the conditions alter, the order necessarily alters with them.

§ 68. The answer to this will probably be, That certain truths have such a character as to render their negation inconceivable, *no* alteration being conceivable in relations so absolute: and it is these truths that involve Necessity and *à priori* inspiration. This leads me to the only distinction between the truths of the two orders, namely, that in those classified as Necessary, the relations are abstracted from all conditions, and considered simply in themselves; whereas in those classified as Contingent, the relations are mixed with the variable conditions; and it is in this variability that the contingency lies. When we say ‘ $2 \times 2 = 4$,’ or ‘the internal angles of a triangle are equal to two right angles,’ we abstract the relations of Number and Form from all other conditions whatever, and our propositions are true, whether the objects counted and measured be hot or cold, large or small, heavy or light, red or blue. Inasmuch as the truths express the abstract relations only, no change in the other conditions can affect these relations; and truths must always remain undisturbed *until* a change take place in their terms. Alter the number 2, or the figure triangle, by an infinitesimal degree, and the truth is thereby altered. When we say that bodies expand by heat, the proposition is a concrete one, including the variable conditions, but although these variable conditions prevent our saying that ‘all bodies will, under all conditions, be always and for evermore expanded by heat,’ the case is not really distinguished from the former one, since both the Contingent and the Necessary Truth can only be altered by an alteration in the terms. If a body which does not expand by heat (there are such) be brought forward as impugning the truth of our proposition, we at once recognise that this body is under different conditions from those which our proposition included. This is the introduction of a new truth, not a falsification of the old. Our error, if we

erred, was in too hastily assuming that all bodies were under the same conditions.

Hence the correct definition of a Contingent Truth is ‘one which *generalises the conditions*;’ while that of a Necessary Truth is ‘one which is an *unconditional generalisation*.’ The first affirms that whatever is seen to be true, under present conditions, will be true so long as these conditions remain unaltered. The second affirms that whatever is true now, being a truth irrespective of conditions, cannot suffer any change from interfering conditions, and must therefore be universally true.

‘The belief in the uniformity of nature is not a necessary truth, however constantly guaranteed by our actual experience. We are not compelled to believe that because A is ascertained to be the cause of B at a particular time, whatever may be meant by that relation, A must therefore inevitably be the cause of B on all future occasions.’* This will command the assent of every one who fails to perceive the silent change in the terms of the proposition. Instead of saying ‘on all *like* occasions,’ which would give necessity to the proposition, Mr. Mansel renders it contingent by saying, ‘on all future occasions,’ and the contingency lies in this, that some of the future occasions may be *unlike*, in which cases a new proposition replaces the old. ‘That fire will ignite paper on all occasions when the two may be brought together,’ is what no one but a child or a savage with limited experience would assert; but that fire will always ignite paper on all future occasions which present conditions precisely similar to those that have once caused the ignition, is a truth having the character of necessity and universality which belongs to all identical propositions, and to those only.

§ 69. It will now be an easier task to criticise the arguments which profess to show that necessity and universality are irresistible marks of an origin superior to Experience. If what has already been said has found acceptance with the reader, he will recognise that every proposition being neces-

* MANSSEL: *Metaphysics*, 267.

sarily true, if it is true at all, the only question that can arise is, *Is the proposition true?* The only answer that can decide this, is one which reduces it to an identical proposition; and as this reduction is the process of Verification, and all Verification is through Experience, the conclusion inevitably reached is one directly counter to the *à priori* hypothesis.

Two positions require to be established. First, that we gain our conceptions of Mathematical, no less than Physical, relations through Experience. Secondly, that in those conceptions so gained are involved their characters of universality and necessity.

§ 70. The argument could not indeed be conducted if we allowed Experience to be restricted to Sensation only, as the metaphysicians unwarrantably restrict it. Dr. Whewell finds no difficulty in showing that propositions 'obtained by mere observation of actual facts' cannot be necessarily true; for no proposition whatever can be thus obtained. His definition of Experience is, 'the impressions of sense and our consciousness of our thoughts.'^{*} A far more accurate and philosophical thinker has defined its wider sense to be 'co-extensive with the whole of consciousness, including all of which the mind is conscious as agent or patient, all that it does from within, as well as all that it suffers from without;' and he truly adds, 'in this sense the laws of thought, as well as the phenomena of matter, in fact, all knowledge whatever, may be said to be derived from experience.'[†] The reader, not familiar with Kant's, or Mr. Mansel's speculations, may, perhaps, marvel that, after so comprehensive and just a definition of Experience, Mr. Mansel escapes the conclusion he has himself pointed out as irresistible, and falls back into the *à priori* argument, restricting Experience to 'its narrower and more common meaning, as limited to the results of sensation and perception only.' The explanation is, that Mr. Mansel adopts the Kantian conception of Forms of Thought,

^{*} WHEWELL: *Hist. of Scientific Ideas*, 1858, i. 131.

[†] MANSEL: *Prolegomena Logica*, 93.

as conditions of Experience, a conception I have attempted to refute. (Vol. ii. pp. 475 sq.) One passage is all that need be given:—

'That experience,' says Mr. Mansel, 'is the chronological antecedent of all our knowledge, even of the most necessary truths, is now generally admitted. But a distinction is frequently drawn between truths or notions of which experience is the *source* and those of which it is only the *occasion*. . . . Every general concept is in one sense empirical; for every concept must be formed from an intuition, and every intuition is experienced. But there are some intuitions which, from our constitution and position in the world, we cannot help experiencing, and there are others which, according to circumstances, we may experience or not. The former will give rise to concepts which, without any great impropriety of language, may be called *native* or *à priori*; being such as *though not coeval with the mind itself* [an important admission] will certainly be formed in every man as he grows up, and such as it was pre-ordained that every man should have. The latter will give rise to concepts which, for a like reason, may be called *adventitious* or *à posteriori*; being such as may or may not be formed according to the special experience of this or that individual.'^{*}

Inasmuch as I throughout interpret Experience according to the wider definition given by Mr. Mansel, and only differ from him in regarding the Forms of Thought as evolved through Experience, both in the race and the individual, whereas he (confounding, I think, Anatomy with Morphology) regards the Forms as conditions of experience, it will be needless to criticise his defence of Necessary Truths, having an *à priori* source, because the arguments I have urged against Kant are the arguments I should urge against Mr. Mansel.

§ 71. We may thus securely lay down the proposition that whatever can be learned must be learned by and through Experience; and we have then to examine whether we learn

^{*} *Op. cit.* p. 170.

Necessary Truths, or bring them with us into the world as the heritage of a higher life.

That two parallel lines can never meet is a Necessary Truth. That is to say, it necessarily follows from the definition of a straight line. To call it, however, an *à priori* truth, a truth independent of Experience, is a very imperfect analysis of the mind's operations. An attempt is made to prove that the idea could never have been gained through Experience because it commands universal assent, and because Experience itself could never give it necessity. Dr. Whewell's argument is, that let us follow two parallel lines out as far as we can, we are still unable to follow them to infinity; and, for all our experience can tell us to the contrary, these lines may possibly begin to approach immediately beyond the farthest point to which we have followed them, and so finally meet. Now, what ground have we for believing that this possibility is not the fact? In other words, how do we know the axiom to be absolutely true? Clearly *not* from Experience, says Dr. Whewell, following Kant.

We answer, Yes; clearly *from* Experience. For our experience of two parallel lines is precisely this: they do not enclose space. Dr. Whewell says that, for all our experience can tell us to the contrary, the lines may possibly begin to approach each other at some distant point; and he would correct this imperfect experience by *à priori* truth. The case is precisely the reverse. The tendency of the mind unquestionably is, to fancy that the two lines *will* meet at some point; it is enlarged experience which corrects this tendency. There are many analogies in nature to suggest the meeting of the two lines. It is only our reflective experience which can furnish us with the proof which Dr. Whewell refers to ideas independent of all Experience. What proof have we that two parallel lines cannot enclose space? Why, this: as soon as they *assume the property of enclosing space, they lose the property of parallelism*: they are no longer *straight* lines, but *bent* lines. In carrying out imaginatively the two parallel lines into infinity, we have a ten-

dency to make them approach; we can only correct this by a recurrence to our experience of parallel lines; we must call up a distinct image of a parallel, and then we see that two such lines cannot enclose space.

The whole difficulty lies in the clearness or obscurity with which the mind makes present to itself past experience. 'Refrain from rendering your terms into ideas,' says Herbert Spencer, 'and you may reach any conclusion whatever. The whole is equal to its part, is a proposition that may be quite comfortably entertained so long as neither wholes nor parts are imagined.*' But no sooner do we make present to our minds the meaning of parallel lines, than in that very act we make present the impossibility of their meeting, and only as the idea of these lines becomes wavering, does the idea of their meeting become possible. A is no longer A, but B.

'Necessary truths,' says Dr. Whewell, 'are those in which we not only learn that the proposition *is* true, but see that it *must* be true; in which the negation is not only false, but impossible; in which we cannot, even by an effort of the imagination, or in a supposition, conceive the reverse of that which is asserted. That there are such truths cannot be doubted. We may take, for example, all relations of Number. Three and two make five. We cannot conceive it otherwise. We cannot, by any freak of thought, imagine three and two to make seven.'

That Dr. Whewell cannot, by any freak of thought, *now* imagine three and two to make seven, is very likely; but that he could *never* imagine this, is untrue. If he had been asked the question before he had learned to reckon, he would have imagined seven quite as easily as five: that is to say, he would *not* have known the relation of three and two. Children have no intuitions of numbers: they learn them as they learn other things. 'The apples and the marbles,' says Herschel, 'are put in requisition, and through the multitude of gingerbread-nuts their ideas acquire clearness, precision, and generality.' But though, from its simplicity, the calculation

* *Principles of Psychology*, p. 49.

of three added to two is with a grown man an instantaneous act, yet if you ask him suddenly how many are twice 365, he cannot answer till he has reckoned. He might certainly, by a very easy 'freak of thought' (i.e., by an erroneous calculation), imagine the sum-total to be 720; and although, when he repeats his calculation, he may discover the error, and declare 730 to be the sum-total, and say, 'It is a Necessary Truth that 365 added to 365 make 730,' we should not in the least dispute the necessity of the truth, but presume that he had arrived at it through experience, namely, through his knowledge of the relations of numbers, a knowledge which he remembers to have laboriously acquired when a boy at school.

Dr. Whewell maintains that whereas Contingent Truths are seen to be true only by observation, and could not beforehand have been detected, Necessary Truths are 'seen to be true by a pure act of thought.' But he overlooks the fact, that even the simple truths of Number are not seen to be true *before* these relations have been exhibited; and if they are afterwards seen to be true by a pure act of thought, not less so are physical truths, once demonstrated, seen by a pure act of thought: neither can be seen beforehand. He declares that we cannot distinctly, although we may indistinctly, conceive the contrary of a Necessary Truth. Here again the oversight is the same. We cannot conceive the contrary of a truth *after* its necessity has been demonstrated, but we can distinctly conceive that $17+9=25$ *before* verification. So little does he apprehend the real case, that, referring to the mistakes of children and savages, he winds up with the serene remark, 'But I suppose no persons would, on such grounds, hold that these arithmetical truths are truths known only by experience.'

§ 72. Let us now turn to another argument. Kant says: 'Experience, no doubt, teaches us that this or that object is constituted in such and such a manner, but not that it could not possibly exist otherwise.' . . . 'Empirical universality is only an arbitrary extension of the validity from that which may be predicated of a proposition valid in most

cases to that which is asserted of a proposition which holds good in all. When, on the contrary, strict universality characterises a judgment, it necessarily indicates another peculiar source of knowledge, namely, a faculty of cognition *à priori*. Necessity and strict universality, therefore, are infallible tests for distinguishing pure from empirical knowledge, and are inseparably connected with each other.* And elsewhere: 'If we thought to free ourselves from the labour of these investigations by saying, "Experience is constantly offering us examples of the relation of cause and effect in phenomena, and presents us with abundant opportunity of abstracting the conception of cause, and so at the same time of corroborating the objective validity of this conception"—we should in this case be overlooking the fact that the conception of cause cannot arise in this way at all; that on the contrary it must either have a basis in the Understanding, or be rejected as a mere chimera. For this conception demands that something (A) should be of such a nature that something else (B) should follow from it necessarily, and according to an absolutely universal law. We may certainly collect from phenomena a law, according to which this or that *usually* happens, but the element of necessity is not to be found in it. Hence it is evident, that to the synthesis of cause and effect belongs a dignity which is utterly wanting in any empirical synthesis.' †

§ 73. I answer that the very fact of our being compelled to judge of the unknown by the known—of our irresistibly anticipating the future to resemble the past—of our incapacity to believe that similar effects will not always follow similar causes—this fact is a proof that we have *no* ideas except such as are acquired through Experience, and that uniformity in Experience irresistibly determines our conceptions of the future. For if we had *à priori* ideas, these ideas being superior to Experience, would not always inevitably conform to it; they would bring *another* standard by which to judge—

* KANT: *Kritik: Einleitung*, § ii. (MICKLEJOHN'S translation, p. 3).

† *Op. cit.* *Transcendental Logik*, § 9 (Transl., p. 76).

a standard which was not that of the already known. Have we such a standard?

§ 74. The school of *à priori* philosophers maintain that we have, and that the standard is the Necessity and Universality which certain truths involve, and which cannot be given in Experience. But we have had abundant evidence that every truth is necessarily true, and the fallacy is, that of first using a proposition in one sense, and then concluding from it in a different sense. It is not Truth which is contingent, but conditions which are variable, and every truth becomes invariable so long as the conditions do not vary. The same argument proves universality. If a truth simply express an unconditional generalisation—if it express an abstract relation, of course it is true for ever without possibility of change. In both cases we say A is A, and will be A for ever. When Kant says Experience cannot be universal, but only general, and cannot therefore bestow universality, because it cannot itself be universal; he forgets that Experience itself is no more general than it is universal—it is particular, and *repeated*. Now, just as a finite line may be produced to infinity although the mind is finite, just as zero may be added to zero, and space to space, without end, by the simple process of repetition, so may a truth 'A is A,' though particular in itself, be transformed into an universal.

I close here the discussion of one of the most important topics in the whole range of Metaphysics, and with it these Prolegomena.

We are now to enter on the scene of History, and see men nobly striving to grapple with the Unknowable. The shadow of the unknown world everywhere mingles with the light of day. It is the dark background on which Phenomena are visible. It is always present, and always limiting—as shadows limit—the objects of our thought. Beyond the Known, stretches the vague Mystery, into which our eyes peer vainly yet persistently. The border-land is ill-defined, and it is so because the sphere of the Known is always becoming larger

and larger. We always hope that the Unknown is not also the Unknowable.

Hence Speculation is tempted to enter the realm of shadows, and will not admit the obvious fact that, on quitting *terra firma*, it abuts on vacancy, and peoples an airy void with airy nothings. Psychology has to check this groping amid shadows, by showing that the coast-line of the Knowable is sharply defined from the ocean of the Unknowable by the necessary limitation of human faculties. Between us and that ocean there stretches a vast and fertile region, where golden harvests have already been reaped, and where still richer harvests await the sickle—truths already gathered for the regulation of our Life, and wider truths which will hereafter be gathered for its renovation.

HISTORY
OF
PHILOSOPHY.

THE HISTORY
OF
PHILOSOPHY.

FIRST EPOCH.

*Philosophy separates itself from Theology, and attempts
a rational explanation of cosmical phenomena.*

CHAPTER I.

THE PHYSICISTS.

§ I. THALES.

IT is the distinguishing peculiarity of the Greeks, that they were the only people of the ancient world who were prompted to assume a scientific attitude in explaining the mysteries which surrounded them. They were the first and only people who disengaged speculation from theological guidance. This inestimable benefit will be the better appreciated, as men more and more learn, through the history of thought, how difficult it has been to keep the scientific attitude untrammelled, and how obstructive theological trammels have been to all effective progress. Europe has not yet entirely freed itself from these obstructions. In special inquiries, particularly in mathematical and physical inquiries, the influence of Theology is no longer felt; but in Biology, Psychology, and Sociology, it is still disastrously

obstructive, warping men's views, alarming tender consciences, and distorting the positive inductions of Reason into agreement with the arbitrary deductions of Faith. We have long learned that the provinces of Religion and Knowledge are separate; we have long learned that the inductions of Astronomy and Physics relate to the order of phenomena, and that our knowledge of this order is in no respect dependent on, or influenced by, our religious convictions; but we have not yet learned that this is true of all phenomena, of all science. The Greeks separated the two; and consequently it is to them that we owe the foundations of all our scientific knowledge.

Not only Mathematics and Logic do we owe to Greek invention, we also owe to it the first systematic conception of Political Science, of Education, and of the Natural Sciences. And the spirit in which these researches were pursued is even more remarkable than the results attained. As the primeval fire-mist, when condensed into a planet, gradually became a human habitation, so the vast aspirations of the Eastern mind when contracted into scientific research rapidly became available for human needs and human knowledge. Progress was soon visible everywhere. In Greece, owing to speculative activity being entirely untrammelled by Theology, Tradition, or Political Institutions, and left to run its own free course, progress was so rapid that the brief period of three centuries saw the full development of all the chief phases of philosophy, and the origination of all its fundamental solutions.

The contrast between the impetuous progress of Grecian thought and the stationariness of Eastern thought may be more thoroughly appreciated by comparison with the slowness of European progress. Thought has moved in Europe with a rapidity unknown in the East; but it has moved under fetters. It has had a greater momentum than the Grecian thought, but it has had also a greater friction to overcome. The brilliant period of its history has been the period in which the traditions of the Church have been most resolutely disregarded.

It is a suggestive fact that the dawn of scientific speculation in Greece should be coincident with a great religious movement in the East. The sixth century before Christ was not only the epoch when cosmical phenomena were extricated from theological explanations, but also the epoch when the doctrines of Bouddha gathered up the scattered beliefs of a fast-decaying polytheism into one energetic synthesis of monotheism; and (according to the German critics) it was about this time that the polytheism of the Hebrews gave place to monotheism,—Elohim to Jehovah. In fact the great wave of the sixth century is one of progress. But the progress of polytheism to monotheism was a continuous development, whereas the progress of theological philosophy to cosmical philosophy was a revolution. The first was a process of generalisation, the many Gods being resolved into one. The second was a change of attitude; though it also was carried along by a subtle process of generalisation wherein the various powers of nature were resolved into one. The monotheistic tendency is visible in Greece, as elsewhere; the Gods gradually lose their independent autocratic position, and assume subordinate positions under Zeus, who in later systems becomes Intelligence and Goodness. Side by side with this tentative and growing monotheism there is a bold and unhesitating *monodynamism*; the efforts of all the early thinkers being to reduce all the powers of nature to one principle.

The early Greek had no real predecessor from whom to learn. He found himself in the presence of mysteries which he vainly endeavoured to explain by polytheistic agencies. He not only saw reason to disbelieve in these agencies, but saw that if they existed, their arbitrary and inscrutable volitions rendered all explanation and prediction impossible. He sought elsewhere. Thales and the other Ionic thinkers fixed upon common agencies, water, fire, air, &c., and tried to reconstruct the world out of these. The attempt, we know, was unsuccessful; but, as Mr. Grote remarks, the memorable fact is that they made the attempt.

The chief interest therefore which belongs to the speculation of this school arises from the new mental attitude; and, consequently the uncertainty which hangs over the records of the actual tenets is a matter of little moment. It is impossible now to ascertain what really were the opinions of the early thinkers; or how the tenets which they are said to have held, presented a logical coherence to their minds; if in the ensuing pages an attempt is made to give this logical coherence, I beg the reader to understand that it is merely a conjectural representation, not to be accepted as historical fact. For the purposes of History, it is enough if we can mark the leading movements of speculation, and the part which each epoch played in the evolution of Philosophy. The great fact respecting this First Epoch is that the belief in the phenomena of Nature as brought about by the volition of numerous unseen beings was quietly set aside; the causes of all change were sought in conditions of things themselves.

It is on this ground that Thales is considered to be the father of Greek Speculation. The step he took was small, but it was decisive. Accordingly, although the events of his life are shrouded in mystery, or belong to the domain of fable, and although we have record only of a few of his tenets, and those tenets fragmentary and incoherent, yet we know enough of the general tendency of his doctrines to speak of him as the originator of a school.

Thales was born at Miletus, a Greek colony in Asia Minor. The date of his birth is extremely doubtful; but the first year of the 36th Olympiad (B. C. 636) is the date generally accepted. He belonged to one of the most illustrious families of Phœnicia, and took a conspicuous part in all the political affairs of his country. His immense activity in politics has been denied by later writers, as inconsistent with the tradition, countenanced by Plato,* of his having spent a life of solitude and meditation; while on the other hand his affection for solitude has been questioned on the ground of his political activity. Yet the two things are perfectly

compatible. Meditation does not necessarily unfit a man for action; nor does an active life absorb all his time, leaving him none for meditation. The wise man will strengthen himself by meditation before he acts; and he will act, to test the truth of his meditations.

Miletus was one of the most flourishing Greek colonies; and at the period we are now speaking of, before either a Persian or a Lydian yoke had crushed the energies of its population, it was a fine field for the development of mental energies. Its commerce both by sea and land was immense. Its political constitution afforded opportunities for individual activity. It is more probable that Thales, both by birth and education would be induced to remain there, than that he would travel into Egypt and Crete for the prosecution of his studies, as some maintain, although upon no sufficient authority. The only ground for the conjecture is the fact of Thales having acquired mathematical knowledge; and from very early times, as we see in Herodotus, it was the fashion to derive every branch of knowledge from Egypt. So little consistency is there however in this narrative of his voyages, that he is said to have astonished the Egyptians by showing them how to measure the height of the pyramids by their shadows. A nation so easily astonished by one of the simplest of mathematical problems could have had little to teach. Perhaps the strongest proof that he never travelled into Egypt—or that, if he travelled there, he never learned from the priests—is the absence of all trace, however slight, of any Egyptian doctrine in his philosophy which he might not have found equally well at home.

The distinctive characteristic of the Ionian School, in its first period, was its inquiry into the constitution of the universe. Thales opened this inquiry. It is commonly said: 'Thales taught that the principle of all things was water.' On a first glance, this will perhaps appear a mere extravagance. But the serious student will be slow to accuse his predecessors of sheer and transparent absurdity. The history of Philosophy may be the history of errors; it is not

a history of transparent errors. All the systems which have gained acceptance have had a pregnant meaning, or they would not have been accepted. The meaning represented, and in some way, gave consistency to the opinions of the epoch, and as such is worth penetrating. Thales was one of the most extraordinary men that ever lived, and produced an extraordinary revolution. Such a man was not likely to have enunciated a philosophical thought which any child might have refuted. Let us endeavour to penetrate the meaning of his thought; let us see if we cannot in some shape trace its rise and growth in his mind.

Thales, speculating on the constitution of the universe, could not but strive to discover the one principle—the primary Fact—the substance, of which all special existences were but the modes. Seeing around him constant transformations—birth and death, change of shape, of size, and of mode of existence—he could not regard any one of these variable states of existence as Existence itself. He therefore asked himself, What is that invariable Existence of which these are the variable states? In a word, What is the *beginning* of things?

To ask this question was to open the era of philosophical inquiry. Hitherto men had contented themselves with accepting the world as they found it; with believing what they saw; and with adoring what they could not see.

Thales felt that there was a vital question to be answered relative to the beginning of things. He looked around him, and the result of his meditation was the conviction that Moisture was the Beginning. He was impressed with this idea by examining the constitution of the earth. There also he found moisture everywhere. All things he found nourished by moisture; warmth itself he declared to proceed from moisture; the seeds of all things are moist. Water when condensed becomes earth. Thus convinced of the universal presence of water, he declared it to be the beginning of things.

Thales would all the more readily adopt this notion from its harmonising with ancient opinions; such for instance as

those expressed in Hesiod's Theogony, wherein Oceanus and Thetis are regarded as the parents of all such deities as had any relation to Nature. 'He would thus have performed for the popular religion that which modern science has performed for the book of Genesis: explaining what before was enigmatical.*

It is this which gives Thales his position in Philosophy. Aristotle calls him *ὁ τῆς τοιαύτης ἀρχηγὸς φιλοσοφίας*; it was he who made the first attempt to establish a physical Beginning, without the assistance of myths. He has consequently been accused of Atheism by modern writers; but Atheism is the growth of a much later thought, and one under no pretence to be attributed to Thales, except on the negative evidence of Aristotle's silence, which we conceive to be directly counter to the supposition, since it is difficult to suppose Aristotle would have been silent had he thought Thales believed or disbelieved in the existence of anything deeper than Water, and *prior* to it. Water was the *ἀρχή*, the beginning of all. When Cicero, following and followed by writers far removed from the times of Thales,† says that 'he held water to be the beginning of things, but that God was the mind which created things out of the water,' he does violence to the chronology of speculation. We agree with Hegel that Thales could have had no conception of God as pure Intelligence, since *that* is the conception of a more advanced philosophy. We doubt whether he had any conception of a Formative Intelligence or of a Creative Power. Aristotle‡ very explicitly denies that the old Physicists made any distinction between Matter (*ἡ ὕλη καὶ τὸ ὑποκείμενον*) and the Moving Principle or Efficient Cause (*ἡ ἀρχὴ τῆς κινήσεως*); and he further adds that Anaxagoras was the first who arrived at the conception of a Formative Intelligence.§ Thales believed in the Gods and in the *generation* of the

* BENJ. CONSTANT, *Du Polythéisme Romain*, i. 167.

† And uncritically followed by many moderns who feel a difficulty in placing themselves at the point-of-view of ancient speculation.

‡ ARISTOT. *Metaph.* i. 3.

§ It will resently be seen that Diogenes was the first to conceive this.

Gods: they, as all other things, had their origin in water. This is not Atheism, whatever else it may be. If it be true that he held all things to be living, and the world to be full of demons or Gods, there is nothing inconsistent in this with his views about Moisture as the origin, the starting-point, the primary existence.

It is needless however to discuss what were the particular opinions of a thinker whose opinions have only reached us in fragments of uncritical tradition; all we certainly know is that the step taken by Thales was twofold in its prompting:—first, to discover the Beginning, the *prima materia* of all things (*ἡ ἀρχή*); secondly, to select from among the elements that element which was most potent and omnipresent. To those acquainted with the history of the human mind both these notions will be significant of an entirely new era.

§ II. ANAXIMENES.

Anaximander is by most historians placed after Thales. We agree with Ritter in giving that place to Anaximenes. The reasons on which we ground this arrangement are, first, that in so doing we follow our safest guide, Aristotle; secondly, that the doctrines of Anaximenes are the development of those of Thales: whereas Anaximander follows a totally different line of speculation. Indeed, the whole ordinary arrangement of the Ionian School seems to have proceeded on the conviction that each disciple not only contradicted his master, but also returned to the doctrines of his master's teacher. Thus Anaximander is made to succeed Thales, though quite opposed to him; whereas Anaximenes, who only carries out the principles of Thales, is made the disciple of Anaximander. When we state that 212 years, *i.e.* six or seven generations, are taken up by the lives of the four philosophers said to stand in the relations of teacher and pupil, the reader will be able to estimate the value of the traditional relationship.

Only the names of the great leaders in philosophy were

thought worth preserving; all those who merely applied or extended a doctrine were very properly consigned to oblivion. This is also the principle upon which the present history assigns the position of Anaximenes as second to Thales: not as his disciple, but as his historical successor: as the man who, taking up the speculation where Thales and his disciples left it, transmitted it to successors in a more developed form.

Of the life of Anaximenes nothing further is known than that he was born at Miletus, probably in the 63rd Olympiad (B. C. 529), others say in the 58th Olympiad (B. C. 548), but there is no possibility of accurately fixing the date. He is said to have discovered the obliquity of the Ecliptic by means of the gnomon.

Pursuing the method of Thales, he could not satisfy himself of the truth of his doctrine. Water was not to him the most significant element. He felt within him a something which moved him he knew not how, he knew not why; something higher than himself; invisible but ever-present: this he called his life. His life he believed to be air. Was there not also without him, no less than within him, an ever-moving, ever-present, invisible air? The air which was within him, and which he called Life, was it not a part of the air which was without him? and, if so, was not this air the Beginning of Things?

He looked around him, and thought his conjecture was confirmed. The air seemed universal.* The earth was as a broad leaf resting upon it. All things were produced from it; all things were resolved into it. When he breathed, he drew in a part of the universal life. All things were nourished by air, as he was nourished by it.

To Anaximenes, as to most of the ancients, Air breathed and expired seemed the very stream of life, holding together all the heterogeneous substances of which the body was

* When Anaximenes speaks of Air, as when Thales speaks of Water, we must not understand these elements as they appear in *this* or *that* determinate form on earth, but as Water and Air pregnant with vital energy and capable of infinite transmutations.

composed, giving them not only unity, but force, vitality. The belief in a living world—that is to say, of the universe as an organism—was very ancient, and Anaximenes, generalising from the phenomena of individual life to universal life, made both dependent on Air. In many respects this was an advance on the doctrine of Thales, and the reader may amuse himself by finding its coincidence with some speculations of modern science. A chemist can truly say, 'Les Plantes et les Animaux dérivent de l'air, ne sont que de l'air condensé, ils viennent de l'air et y retournent.'

§ III. DIOGENES OF APOLLONIA.

Diogenes of Apollonia is the proper successor to Anaximenes, although, from the uncritical arrangement usually adopted, he is made to represent no epoch whatever. Thus, Tennemann places him after Pythagoras. Hegel, by a strange oversight, says that we know nothing of Diogenes but the name.

Diogenes was born at Apollonia, in Crete. More than this we are unable to state with certainty; but as he is said to have been a contemporary of Anaxagoras, we may assume him to have flourished about the 80th Olympiad (B.C. 460). His work *On Nature* was extant in the time of Simplicius (the sixth century of our era), who extracted some passages from it.

Diogenes adopted the tenet of Anaximenes respecting Air as the origin of things; but he gave a wider and deeper significance to the tenet by pointing out the analogy of Air with the Soul.* Struck with the force of this analogy, he was led to push to its ultimate limits. What is it, he may have asked himself, which constitutes Air the origin of things? Clearly its vital force. The air is a soul; therefore it is living and intelligent. But this Force of Intelligence

* By Soul (*ψυχή*) we must understand Life in its most general meaning rather than Mind in the modern sense. Thus the treatise of Aristotle *περὶ ψυχῆς* is a treatise on the Vital Principle, including Mind, not a treatise on Psychology.

is a higher thing than the Air, through which it manifests itself; it must consequently be prior in point of time; it must be the *ἀρχή* philosophers have sought. The Universe is a living being, spontaneously evolving itself, deriving its transformation from its own vitality.

There are two remarkable points in this conception, both indicative of very great progress in speculation. The first is the attribute of Intelligence, with which the *ἀρχή* is endowed. Anaximenes considered the primary substance to be an animated substance. Air was Life, in his system; but the Life did not necessarily imply Intelligence. Diogenes saw that Life was not only Force, but Intelligence; the Air which stirred within him not only prompted, but instructed. The Air, as the origin of all things, is necessarily an eternal, imperishable substance; but, as soul, it is also necessarily endowed with consciousness. 'It knows much,' and this knowledge is another proof of its being the primary substance; 'for without Reason,' he says, 'it would be impossible for all to be arranged duly and proportionately; and whatever object we consider will be found to be arranged and ordered in the best and most beautiful manner.' Order can result only from Intelligence; the Soul is therefore the first (*ἀρχή*). This conception was undoubtedly a great one; but that the reader may not exaggerate its importance, nor suppose that the rest of Diogenes' doctrines were equally rational, we must for the sake of preserving historical truth advert to one or two of his applications of the conception. Thus:

The world, as a living unity, must like other individuals derive its vital force from the Whole: hence he attributed to the world a set of respiratory organs, which he fancied he discovered in the stars. All creation and all material action were but respiration and exhalation. In the attraction of moisture to the sun, in the attraction of iron to the magnet, he equally saw a process of respiration. Man is superior to brutes in intelligence because he inhales a purer air than brutes who bow their heads to the ground.

These attempts at the explanation of phenomena will suffice to show that although Diogenes had made a large stride, he had accomplished very little of the journey.

The second remarkable point indicated by his system is the manner in which it closes the inquiry opened by Thales. Thales, starting from the conviction that one of the four elements was the origin of the world, and Water that element, was followed by Anaximenes, who thought that not only was Air a more universal element than Water, but that, being life, it must be the universal Life. To him succeeded Diogenes, who saw that not only was Air Life, but Intelligence, and that Intelligence must have been the First of Things.

I concur therefore with Ritter in regarding Diogenes as the last philosopher attached to the Physical method; and that in his system the method receives its consummation. Having thus traced one great line of speculation, we must now cast our eyes upon what was being contemporaneously evolved in another direction.

CHAPTER II.

THE MATHEMATICIANS.

§ I. ANAXIMANDER OF MILETUS.

‘AS we now, for the first time in the history of Greek Philosophy, meet with contemporaneous developments, the observation will not perhaps be deemed superfluous that in the earliest times of philosophy, historical evidences of the reciprocal influence of the two lines either entirely fail or are very unworthy of credit; on the other hand, the internal evidence is of very limited value, because it is impossible to prove a complete ignorance in one, of the ideas evolved and carried out in the other; while any argument drawn from an apparent acquaintance therewith is far from being extensive or tenable, since all the olden philosophers drew from one common source—the national habit of thought. When indeed these two directions had been more largely pursued, we shall find in the controversial notices sufficient evidence of an active conflict between these very opposite views of nature and the universe. In truth, when we call to mind the inadequate means at the command of the earlier philosophers for the dissemination of their opinions, it appears extremely probable that their respective systems were for a long time known only within a very narrow circle. On the supposition, however, that the philosophical impulse of these times was the result of a real national want, it becomes at once probable that the various elements began to show themselves in Ionia nearly at the same time, independently and without any external connection.’*

* RITTER: *Hist. Phil.* i. 265.

The chief of the school we are now about to consider was Anaximander, of Miletus, whose birth may be dated in the 42nd Olympiad (B.C. 610). He is sometimes called the friend and sometimes the disciple of Thales. His reputation both for political and scientific knowledge, was very great; and many important inventions are ascribed to him, amongst others that of the sun-dial and the sketch of a geographical map. His calculations of the size and distance of the heavenly bodies were committed to writing in a small work which is said to be the earliest of all philosophical writings. He was passionately addicted to mathematics, and framed a series of geometrical problems. He was the leader of a colony to Apollonia; and he is also reported to have resided at the court of the Tyrant Polycrates, in Samos, where also lived Pythagoras and Anacreon.

No two historians are agreed in their interpretation of Anaximander's doctrines; few indeed are agreed as to the historical position he is to occupy.

Anaximander is stated to have been the first to use the term ἀρχή for the Beginning of things. What he meant by this term principle is variously interpreted by the ancient writers; for, although they are unanimous in stating that he called it the infinite (τὸ ἄπειρον), what he understood by the infinite is yet undecided.*

On a first view, nothing can well be less intelligible than this tenet: 'The Infinite is the origin of all things.' It either looks like the monotheism of a far later date,† or like the word-jugglery of mysticism. It is neither more nor less difficult of comprehension than the tenet of Thales, that 'Water is the origin of all things.' Let us cast ourselves back in imagination into those early days, and see if we cannot account for the rise of such an opinion.

* RITTER: *Hist. Phil.* i. 267.

† Which it certainly could not have been. To prevent any misconception of the kind, we may merely observe that the Infinite here meant, was not even the Limitless power, much less the Limitless mind, implied in the modern conception. In Anaxagoras, who lived a century later, we find τὸ ἄπειρον to be no more than vastness.—See SIMPLICIUS, *Phys.* 33, b, quoted in RITTER.

On viewing Anaximander side by side with his great predecessor and friend, Thales, we cannot but be struck with the exclusively abstract tendency of his speculations. Thales, whose famous maxim, 'Know thyself,' directed the mind to objects essentially concrete, may serve as a contrast to Anaximander, whose axiom, 'The Infinite is the origin of all things,' is a pure effort of abstraction. Let us concede to him this tendency; let us see in him the geometrician rather than the moralist or physicist; let us endeavour to understand how all things presented themselves to his mind in the abstract form, and how mathematics was to him the science of sciences, and we shall then perhaps be able to understand his tenets.

Thales, in searching for the origin of things, found it in Water. But Anaximander, accustomed to abstractions, could not accept so concrete a thing as Water: something more ultimate in the analysis was required. Water itself, which in common with Thales he held to be the material of the universe, was it not subject to conditions? What were those conditions? This Moisture, of which all things are made, does it not cease to be moisture in many instances? And can that which is the origin of all ever change, ever be confounded with individual things? Water itself is a Thing; but a Thing cannot be All Things. The ἀρχή, he said, was not Water; it must be the Unlimited All, τὸ ἄπειρον.

Vague and profitless enough this theory will doubtless appear. The abstraction 'All' will seem a mere distinction in words. But in Greek Philosophy, as we shall repeatedly notice, distinctions in words were generally equivalent to distinctions in things. And if the reader reflects how the mathematician, by the very nature of his science, is led to regard abstractions as entities—to separate form, and treat of it as if it alone constituted body—there will be no difficulty in conceiving Anaximander's distinction between all Finite Things and the Infinite All.

It is thus only we can explain his tenet; and this explanation seems borne out by the testimony of Aristotle and

Theophrastus, who agree that by the Infinite he understood the multitude of elementary parts out of which individual things issued by separation. 'By separation:' the phrase is significant. It means the passage from the abstract to the concrete—the All realising itself in the Individual Thing. Call the Infinite by the name of Existence and say, 'There is Existence *per se*, and Existence *per aliud*; the former is the ever-living fountain whence flow the various *existing Things*.' In this way we may, perhaps, make Anaximander's meaning intelligible.

'Anaximander,' says Ritter, 'is represented as arguing that the primary substance must have been infinite to be all-sufficient for the limitless variety of produced things with which we are encompassed. Now, although Aristotle especially characterises this infinite as a mixture, we must not think of it as a mere multiplicity of primary material elements; for to the mind of Anaximander it was a Unity immortal and imperishable—an ever-producing energy. This production of individual things he derived from an eternal motion of the Infinite.'

The primary Being, according to Anaximander, is unquestionably a Unity. It is One yet All. It comprises within itself the multiplicity of elements from which all mundane things are composed; and these elements only need to be separated from it to appear as separate phenomena of nature. Creation is the decomposition of the Infinite. How does this decomposition originate? By the eternal motion which is the condition of the Infinite. 'He regarded,' says Ritter, 'the Infinite as being in a constant state of incipency, which, however, is nothing but a constant secretion and concretion of certain immutable elements; so that we might well say the parts of the whole are constantly changing, while the whole is unchangeable.'

The idea of elevating an abstraction into a being, and making it the origin of all things, is questionable enough; it is as if we were to say, 'There are numbers 1, 2, 3, 20, 80, 100; but there is also Number in the abstract, of which

these individual numbers are but the concrete realisation: without Number there would be no numbers.' Yet so difficult is it for the human mind to divest itself of its own abstractions, and to consider them as abstractions, that this error lies at the root of the majority of metaphysical systems.

Anaximander separated himself from Thales by regarding the abstract as of higher significance than the concrete: and in this tendency we see the origin of the Pythagorean or mathematical school. The speculations of Thales aimed at discovering the material constitution of the universe; they were founded, in some degree, upon an induction from observed facts, however imperfect that induction might be. The speculations of Anaximander were wholly deductive; and, as such, tended towards mathematics, the science of pure deduction.

As an example of this mathematical tendency we may allude to his cosmical speculation. The central point in his cosmopœia was the earth, which, being of a cylindrical form, with a base in the ratio 1 : 3 to its altitude, was retained in its centre by the aid and by the equality of its distances from all the limits of the world.

From the foregoing we may judge of the propriety of the ordinary historical arrangement which places Anaximander as the successor of Thales. It is clear that he originated one of the great lines of speculative inquiry, and that one, perhaps, the most curious in all antiquity. By Thales, Water, the origin of things, was held to be a real physical element, which in the hands of his successors became gradually transformed into a merely representative emblem of something wholly different (Life or Mind); and the element which lent its name as the representative was looked upon as a secondary phenomenon, derived from that primary force of which it was the emblem. Water was the real primary element with Thales; with Diogenes, Water (having previously been displaced for Air) was but the emblem of Mind.

Anaximander's conception of the All, though abstract, is nevertheless to a great degree physical: it is All Things.

His conception of the Infinite was not purely ideal; it had not passed into the state of a symbol; it was the primary fact of existence; above all, it involved no conception of intelligence except as a mundane finite thing. His *τὸ ἄπειρον* was the Infinite Existence, but not the Infinite Mind. This later development we shall meet with hereafter in the Eleatics.

§ II. PYTHAGORAS.

The life of Pythagoras is shrouded in the dim magnificence of legends, from which it is hopeless to attempt to extricate it. Certain general indications are doubtless to be trusted; but they are few and vague.

As a specimen of the trouble necessary to settle any one point in this biography, we will here cite the various dates given by ancient authors and modern scholars as the results of their inquiries into his birth. Diodorus Siculus says 61st Olympiad; Clemens Alex., 62nd Ol.; Eusebius, 63rd or 64th Ol.; Stanley, 53rd Ol.; Gale, 60th Ol.; Dacier, 47th Ol.; Bentley, 43rd Ol.; Lloyd, 43rd Ol.; Dodwell, 52nd Ol.; Ritter, 49th Ol.; Thirlwall, 51st Ol.; so that the accounts vary within the limits of eighty-four years. If we must make a choice, we should decide with Bentley; not only out of respect for that magnificent scholar, but because the date he assigns agrees with the probable date of the birth of one known to have been Pythagoras's friend and contemporary, Anaximander.

Pythagoras is usually classed amongst the great founders of Mathematics; and this receives confirmation from what we know of the general scope of his labours, and from the statement that he was chiefly occupied with the determination of extension and gravity, and measuring the ratios of musical tones. His science and skill are exaggerated, as indeed is every portion of his life. Fable assigns him the place of a saint, a worker of miracles, and a teacher of more than human wisdom. His very birth was marvellous, some accounts making him the son of Hermes, others of Apollo: in

proof of the latter, he is said to have exhibited a golden thigh. With a word he tamed the Daunian bear, which was laying waste the country; with a whisper he restrained an ox from devouring beans. He was heard to lecture at different places, such as Metapontum and Taurominium, on the same day and at the same hour. As he crossed the river, the river-god saluted him with 'Hail, Pythagoras!' and to him the harmony of the spheres was audible music.

Fable enshrines these wonders. But that they could exist, even as legendary lore, is significant of the greatness of Pythagoras. It is well said by Sir Lytton Bulwer that 'not only all the traditions respecting Pythagoras, but the certain fact of the mighty effect that in his single person he afterwards wrought in Italy, prove him also to have possessed that nameless art of making a personal impression upon mankind, and creating individual enthusiasm, which is necessary to those who obtain a moral command, and are the founders of sects and institutions. It is so much in conformity with the manners of the time and the objects of Pythagoras, to believe that he diligently explored the ancient religious and political systems of Greece, from which he had been long a stranger, that we cannot reject the traditions (however disfigured with fable) that he visited Delos, and affected to receive instructions from the pious ministrants of Delphi.* Whenever we find romantic or miraculous deeds narrated we may be certain that the hero was great enough at least to sustain the weight of this crown of fabulous glory.

But the greatness thus indicated is thought to be diminished by the tradition of his having borrowed all his learning and philosophy from the East. Could not so great a man dispense with foreign teachers? Assuredly; but this is no proof that he did dispense with them. The question of fact is not to be thus disposed of. The historian will ask for better evidence. Unfortunately the evidence on this subject is of little worth. Not until a century and a half had elapsed

* *Athens, its Rise and Fall*, ii. 412.

from the death of Pythagoras was there any statement, now recoverable, made respecting this voyage into Egypt, and then it occurred in an oration by Isocrates, in which the constitution of Lacedæmon is also derived from Egypt.* This is obviously untrustworthy. Aristotle, a better authority, never alludes to Egypt. Nor did the notion gain general acceptance until fifty years or so after Isocrates, when the Greeks had come into frequent connection with the East, and all marvels were supposed to have their origin there. The imaginative Greeks were peculiarly prone to invest the distant and the foreign with striking attributes. They could not believe in wisdom springing up from amongst them; they turned to the East as to a vast and unknown region, whence all novelty, even of thought, must come.

When we consider, as Ritter observes, how Egypt was peculiarly the wonder-land of the olden Greeks, and how, even in later times, when it was so much better known, it was still, as it is to this day, calculated to excite awe by the singular character of its people, which, reserved in itself, was always obtruding on the observer's attention through the stupendous structures of national architecture, we can easily imagine how the Greeks were led to establish some connection between this mighty East and their great Pythagoras. If Pythagoras had travelled into Egypt, or indeed listened to the relations of those who had done so, he would indeed have thereby obtained as much knowledge of Egyptian customs as appears in his system without his having had the least instruction from the Priesthood. The doctrine of metempsychosis was a public doctrine with the Egyptians; though, as Ritter says, he might not have been indebted to them even for that. Funeral customs and abstinence from particular kinds of food were things to be noticed by any traveller. But the fundamental objection to Pythagoras having been instructed by the Egyptian Priests, is to be sought in the constitution of the priestly caste itself. If the

* ZELLER: *Vorträge und Abhandlungen geschichtlichen Inhalts*, 1865, p. 46.

priests were so jealous of instruction as not to bestow it even on the most favoured of their countrymen beyond their caste, how unreasonable to suppose that they would bestow it on a stranger, and one of a different religion!

The ancient writers were sensible of this objection. To get rid of it they invented a story which we shall give as it is given by Brucker. Polycrates was in friendly relations with Amasis, King of Egypt, to whom he sent Pythagoras, with a recommendation to enable him to gain access to the Priests. The King's authority was not sufficient to prevail on the Priests to admit a stranger to their mysteries: they referred Pythagoras therefore to Thebes, as of greater antiquity. The Theban Priests were awed by the Royal mandate, but were loath to admit a stranger to their rites. To disgust the novice, they forced him to undergo several severe ceremonies, amongst which was circumcision. But he could not be discouraged. He obeyed all their injunctions with such patience that they resolved to take him into their confidence. He spent two-and-twenty years in Egypt, and returned perfect master of all science. This is not a bad story: the only objection to it is that it has not a fact to rest on.

To Pythagoras the invention of the word philosopher is ascribed. When he was in Peloponnesus he was asked by Leontius, what was his art. 'I have no art; I am a philosopher,' was the reply. Leontius never having heard the name before, asked what it meant. Pythagoras gravely answered, 'This life may be compared to the Olympic games: for as in this assembly some seek glory and the crowns; some by the purchase or by the sale of merchandise seek gain; and others, more noble than either, go there neither for gain nor for applause, but solely to enjoy this wonderful spectacle, and to see and know all that passes. We, in the same manner, quit our country, which is Heaven, and come into the world, which is an assembly where many work for profit, many for gain, and where there are but few who, despising avarice and vanity, study nature. It is these last whom I call philosophers; for as there is nothing more noble than to

be a spectator without any personal interest, so in this life the contemplation and knowledge of nature are infinitely more honourable than any other application.'

It is necessary to observe that the ordinary interpretation of philosopher, as Pythagoras meant it, a 'lover of wisdom,' is only accurate where the utmost extension is given to the word 'lover.' Wisdom must be the 'be-all and the end-all here' of the philosopher, and not simply a taste or a pursuit. It must be his mistress, to whom a life is devoted. This was the meaning of Pythagoras. The word which had before designated a wise man was σοφός. But he wished to distinguish himself from the *Sophoi*, or philosophers of his day, by name, as he had done by system. What was the meaning of *Sophos*? Unquestionably what we mean by a wise man, as distinct from a philosopher; one whose wisdom is practical, and turned to practical purposes; one who loves wisdom not for its own sake so much as for the sake of its uses. Now Pythagoras loved wisdom for its own sake. Contemplation was to him the highest exercise of humanity: to bring wisdom down to the base purposes of life was desecration. He called himself therefore a philosopher—a lover of Wisdom—to demarcate himself from those who sought Wisdom only as a power to be used for ulterior ends.

This interpretation of the word philosopher may explain some of his opinions. Above all, it explains the constitution of his Secret Society, into which no one was admitted except after a severe initiation. For five years the novice was condemned to silence. Many relinquished the task in despair; they were unworthy of the contemplation of pure wisdom. Others, in whom the tendency to loquacity was observed to be less, had the period commuted. Various humiliations had to be endured: various experiments were made of their powers of self-denial. By these Pythagoras judged whether they were worldly-minded, or whether they were fit to be admitted into the sanctuary of science. Having purged their souls of the baser particles by purifications, sacrifices, and initiations, they were admitted to the sanctuary, where

the higher part of the soul was purged by the knowledge of truth, which consists in the knowledge of immaterial and eternal things. For this purpose Pythagoras commenced philosophy with Mathematics, because, as they just preserve the medium between corporeal and incorporeal things, they can alone draw off the mind from Sensible things and conduct them to Intelligibles.

By his later disciples he was venerated as a God. He who could transcend all earthly struggles, and the great ambitions of the greatest men, to live only for the sake of wisdom, was he not of a higher stamp than ordinary mortals? Well might later historians picture him as clothed in robes of white, his head crowned with gold, his aspect grave, majestic, and calm; above the manifestation of any human joy, of any human sorrow; enwrapped in contemplation of the deeper mysteries of existence; listening to music and the hymns of Homer, Hesiod, and Thales, or listening to the harmony of the spheres. And to a lively, talkative, quibbling, active, versatile people like the Greeks, what a grand phenomenon must this solemn, earnest, silent, meditative man have appeared?

'Pythagoras,' says Sir Lytton Bulwer, 'arrived in Italy during the reign of Tarquinius Superbus, according to the testimony of Cicero and Aulus Gellius, and fixed his residence in Croton, a city in the bay of Tarentum, colonised by Greeks of the Achæan tribe. If we may lend a partial credit to the extravagant fables of later disciples, endeavouring to extract from florid superaddition some original germ of simple truth, it would seem that he first appeared in the character of a teacher of youth, and, as was not unusual in those times, soon rose from the preceptor to the legislator. Dissensions in the city favoured his objects. The Senate (consisting of a thousand members, doubtless of a different race from the body of the people; the first the posterity of the settlers, the last the native population) availed itself of the arrival and influence of an eloquent and renowned philosopher. He lent himself to the consolidation of aristocracies,

and was equally inimical to democracy and tyranny. But his policy was that of no vulgar ambition. He refused, at least for a time, ostensible power and office, and was contented with instituting an organised and formidable society, not wholly dissimilar to that mighty Order founded by Loyola in times comparatively recent. The disciples admitted into this society underwent examination and probation: it was through degrees that they passed into its higher honours, and were admitted into its deeper secrets. Religion made the basis of the fraternity, but religion connected with human ends of advancement and power. He selected the three hundred who at Croton formed his Order, from the noblest families, and they were professedly reared to know themselves, that so they might be fitted to command the world. It was not long before this society, of which Pythagoras was the head, appears to have supplanted the ancient Senate, and obtained the legislative administration. In this Institution Pythagoras stands alone; no other founder of Greek philosophy resembles him. By all accounts he also differed from the other sages of his time in his estimation of the importance of women. He is said to have lectured to, and taught them. His wife was herself a philosopher, and fifteen disciples of the softer sex rank among the prominent ornaments of his school. An Order based upon so profound a knowledge of all that can fascinate or cheat mankind could not fail to secure a temporary power. His influence was unbounded in Croton: it extended to other Italian cities; it amended or overturned political constitutions; and had Pythagoras possessed a more coarse and personal ambition, he might perhaps have founded a mighty dynasty, and enriched our social annals with the result of a new experiment. But his was the ambition not of a hero, but a sage. He wished rather to establish a system than to exalt himself. His immediate followers saw not all the consequences that might be derived from the fraternity he founded; and the political designs of his gorgeous and august philosophy, only for awhile successful, left behind them but the mummeries

of an impotent freemasonry, and the enthusiastic ceremonies of half-witted ascetics. -

'It was when this power, so mystic and so revolutionary, had, by the means of branch societies, established itself throughout a considerable portion of Italy, that a general feeling of alarm and suspicion broke out against the sage and his sectarians. The anti-Pythagorean risings, according to Porphyry, were sufficiently numerous and active to be remembered long generations afterwards. Many of the sage's friends are said to have perished, and it is doubtful whether Pythagoras himself fell a victim to the rage of his enemies, or died, a fugitive, amongst his disciples at Metapontum. Nor was it until nearly the whole of Lower Italy was torn by convulsions, and Greece herself drawn into the contest as pacificator and arbiter, that the ferment was allayed. The Pythagorean institutions were abolished, and the timocratic democracies of the Achæans rose upon the ruins of those intellectual but ungenial oligarchies.

'Pythagoras committed a fatal error when, in his attempt to revolutionise society, he had recourse to aristocracies for his agents. Revolutions, especially those influenced by religion, can never be worked out but by popular emotions. It was from this error of judgment that he enlisted the people against him; for by the account of Neanthes, related by Porphyry, and indeed from all other testimony, it is clearly evident that to popular not party commotion his fall must be ascribed. It is no less clear that after his death, while his philosophical sect remained, his political code crumbled away. The only seeds sown by philosophers which spring up into great States, are those that, whether for good or evil, are planted in the hearts of the Many.'

We cannot omit the story which so long amused the world, respecting his discovery of the musical chords. Hearing one day, in the shop of a blacksmith, a number of men striking successively a piece of heated iron, he remarked that all the hammers, except one, produced harmonious chords, viz. the octave, the fifth, and the third; but the

sound between the fifth and the third was discordant. On entering the workshop, he found the diversity of sounds was owing to the difference in the weight of the hammers. He took the exact weights, and on reaching home suspended four strings of equal dimensions, and hanging a weight at the end of each of the strings equal to the weight of each hammer, he struck the strings, and found the sounds correspond with those of the hammers. He then proceeded to the formation of a musical scale.

This story is significant of the lax credulity which allows historical fictions to become current without any attempt being made to ascertain whether they have even a basis in fact. A story should be shown to be within the limits of possibility; that is the least demand we can make. But, in the present case, 'Though both hammers and anvil have been swallowed by ancients and moderns with most ostrich-like digestion, yet upon examination and experiment it appears that hammers of different size and weight will no more produce different tones upon the same anvil, than bows or clappers of different size will from the same string or bell.'*

§ III. PHILOSOPHY OF PYTHAGORAS.

There is no system more difficult to seize and represent accurately than that commonly called the Pythagorean. It has made prodigious noise in the world; and is consequently often confounded with its distant echoes. An air of mystery, always inviting to a large class, surrounds it. The marvellous relations concerning its illustrious founder, the supposed assimilation it contains of various elements of Eastern speculation, and the supposed symbolical nature of its doctrines, have all equally combined to render it attractive and contradictory: Every dogma in it has been traced to some prior philosophy. Not a vestige will remain to be called the property of the teacher himself, if we restore to the Jews, Indians, Egyptians, Chaldeans, Phœnicians, nay even

* BURNES, *Hist. of Music*.

Thracians, those various portions which he is declared to have borrowed from them.

All this pretended plagiarism we incline to think extremely improbable: Pythagoras was a consequence of Anaximander; and his doctrines, in as far as we can gather their leading tendency, were but a continuation of that abstract and deductive philosophy of which Anaximander was the originator.

At the outset we must premise, that whatever interest there may be in following out the particular opinions recorded as belonging to Pythagoras, such a process is quite incompatible with our plan. The greatest uncertainty still exists, and must for ever exist amongst scholars, respecting the genuineness of those opinions. Even such as are recorded by trustworthy authorities are always vaguely attributed by them to 'the Pythagoreans,' not to Pythagoras. Modern criticism has clearly shown that the works attributed to Timæus and Archytas are spurious; and that the supposed treatise of Ocellus Lucanus on the 'Nature of the All' cannot even have been written by a Pythagorean. Plato and Aristotle, the only ancient writers who are to be trusted in this matter, do not attribute any peculiar doctrines to Pythagoras. The reason is simple. Pythagoras taught in secret; and never wrote. What he taught his disciples it is impossible accurately to learn from what those disciples themselves taught. His influence over their minds was unquestionably immense; and this influence would communicate to his school a distinctive tendency, but not one accordant doctrine; for each scholar would carry out that tendency in the direction which best suited his tastes and powers.

The extreme difficulty of ascertaining accurately what Pythagoras thought, or even what his disciples thought, will not embarrass us if we can but ascertain the general tendency of their speculations, and, above all, the peculiarity of their method. For this difficulty—which, to the critical historian insuperable, only affects us indirectly—renders indeed our

endeavour to seize the characteristic method and tendency more hazardous and more liable to contradiction; but it does not compel us to interrupt our march for the sake of storming every individual fortress of opinion we may encounter on our way. We have to trace out the map of the philosophical world; we must be careful to ascertain the great outlines of each country: this we may be enabled to do without absolutely being acquainted with the internal varieties of that country, for geographers are not bound to be also geologists.

What were the method and tendency of the Pythagorean school? The method, purely deductive; the tendency, wholly towards the consideration of abstractions as the only true materials of science. Hence the name not unfrequently given to that school, of 'the Mathematical.' The list of Pythagoreans embraces the greatest names in mathematics and astronomy,—Archytas and Philolaus, and subsequently Hipparchus and Ptolemy.*

We may now perhaps, in some sort, comprehend what Pythagoras meant when he taught that *Numbers* were the *principles of Things*: τοὺς ἀριθμοὺς αἰτίους εἶναι τῆς οὐσίας,† or, to translate more literally, 'Numbers are the cause of the material existence of Things: 'οὐσία being here evidently the expression of concrete existence. This is confirmed by the wording of the formula given elsewhere by Aristotle, that Nature is *realised* from Numbers: τὴν φύσιν ἐξ ἀριθμῶν συνιστᾶσι.‡ Or again: Things are but the copies of Numbers: μίμησιν εἶναι τὰ ὄντα τῶν ἀριθμῶν.§ What Pythagoras meant was, that Numbers were the ultimate nature of things. Anaximander saw that things in themselves are not final; they are constantly changing both position and attributes; they are variable, and the principle of existence must be invariable; he called that invariable existence THE ALL.

* ÆSCHYLUS, a disciple of Pythagoras, makes his Titan boast of having discovered for men, Number, the highest of the sciences; καὶ μὴν ἀριθμὸν, ἑξοχὸν σοφισμάτων, ἐξείπον ἀνθρώποις.—*Prom.* 459.

† ARISTOT. *Metaph.* i. 6.

‡ *De Cælo*, iii. 1.

§ *Metaph.* i. 6.

Pythagoras saw that there was an invariable existence lying beneath these varieties; but he wanted some more definite expression for it, and he called it Number. Thus each individual thing may change its position, its mode of existence; all its peculiar attributes may be destroyed except one, namely its numerical attribute. It is always 'one' thing; nothing can destroy that numerical existence. Combine the thing in every possible variety of ways, and it still remains 'one;' it cannot be less than 'one,' it cannot be made more than 'one.' Resolve it into its minutest particles, and each particle is 'one.' Having thus found that numerical existence was the only invariable existence, he was easily led to proclaim all things to be but copies of Numbers. 'All phenomena must originate in the simplest elements,' says Sextus Empiricus, 'and it would be contrary to reason to suppose the Principle of the Universe to participate in the nature of sensible phenomena. The *Principia* are consequently not only invisible and intangible, but also incorporeal.'

As numerical existence is the ultimate state at which analysis can arrive with respect to finite things, so also is it the ultimate state at which we can arrive with respect to the Infinite, or Existence in itself. The Infinite, therefore, must be one. One is the absolute Number; it exists in and by itself; it has no need of any relation with anything else, not even with any other number; Two is but the relation of One to One. All modes of existence are but finite aspects of the Infinite; so all numbers are but numerical relations of the one. In the original one all numbers are contained, and consequently the elements of the whole world.

Observe, moreover, that one is necessarily the ἀρχή—the beginning of things so eagerly sought by philosophers, since, wherever you begin, you must begin with one. Suppose the number be three, and you strike off the initial number to make two, the second then will be one. In a word, one is the Beginning of all things.

The verbal quibble on which this, as indeed the whole

system reposes, need not excite any suspicion of the sincerity of Pythagoras. The Greeks were unfortunately acquainted with no language but their own: and, as a natural consequence, mistook distinctions in language for distinctions in things. It has been well said by Dr. Whewell, that 'all the first attempts to comprehend the operations of Nature led to the introduction of abstract conceptions, vague indeed, but not therefore unmeaning. And the next step in philosophising necessarily was to make those vague abstractions more clear and fixed, so that the logical faculty should be able to employ them securely and coherently. But there were two ways of making this attempt; the one, by examining the words only, and the thoughts which they call up: the other, by attending to the facts and things which bring these abstract terms into use. The Greeks followed the *verbal* or *notional* course, and failed.*

It is only by means of the above explanation that we can credit the belief in distinctions so wire-drawn as those of Pythagoras; it is only thus that we can understand how he could have held that Numbers were Beings. Aristotle attributes this conception to the fondness of Pythagoras for mathematics, which concerns itself with the abstract, not with the material existence of sensible things; but surely this is only half the explanation? The mathematicians in our day not only reason entirely with symbols, which stand as the representatives of things, without having the least affinity or resemblance to the things (being wholly arbitrary marks), but very many of these men never trouble themselves at all with inspecting the things about which they reason by means of symbols. Much of the science of Astronomy is carried on by those who never use a telescope; it is carried on by figures upon paper, and calculations of those figures. Because, however, astronomers use numbers as symbols, they do not suppose that numbers are more than symbols. Pythagoras was not able to make this distinction.

* *History of the Inductive Sciences*, i. 34.

He believed that numbers were things in reality, not merely in symbol. When therefore Ritter says that the Pythagorean formula 'can only be taken symbolically,' he appears to us to commit a great anachronism, and to antedate by several centuries a mode of thought at variance with all we know of Greek Philosophy; at variance also with the express testimony of Aristotle, who says, 'The Pythagoreans did not separate Numbers from Things. They held Number to be the Principle and Material of things, no less than their essence and power.'* The notion that because we, in the present state of philosophy, cannot conceive Numbers otherwise than as symbols, therefore Pythagoras must have conceived them in the same way, is one which has been very widely spread, but which we hold to be as great an anachronism as Shakespeare's Hector quoting Aristotle, or Racine exhibiting the etiquette of Versailles in the camp at Aulis. And Ritter himself, after having stated with considerable detail the various points in this philosophy, admits that the essential doctrine rests on 'the derivation of all in the world from mathematical relations, and on the resolution of the relations of space and time into those of units or numbers. All proceeds from the original one, or primary number, or from the plurality of units or numbers into which the one in its life-development divides itself.' Now, to suppose that this doctrine was simply mathematical and not mathematico-cosmological, is to violate all principles of historical philosophy; for it is to throw the opinions of our day into the period of Pythagoras. As a final proof, consider the formula, *μύμησιν εἶναι τὰ ὄντα τῶν ἀριθμῶν*, 'Things are the copies of Numbers.' This formula, which of all others is the most favourable to the notion we are combating, will on a close

* *Metaph.* i. 5. Perhaps it would be more accurate to say, 'Numbers are the Beginning of things, the cause of their material existence (*ἄλῃν τοῖς ὄντι*: Aristotle has before defined *ἄλῃ* as *causa materialis*, cap. 3) and of their modifications (*ὡς πᾶσι τε καὶ ἑξέσι*).'

The whole chapter should be consulted by those who believe in the symbolical meaning; a belief Aristotle had certainly no suspicion of. I have translated all the passages bearing on this point at the close of this Section.

inspection exhibit the real meaning of Pythagoras to be directly the reverse of symbolical. Symbols are arbitrary marks, bearing no resemblance to the things they represent; a, b, c, x are but letters of the alphabet; the mathematician makes them the symbols of quantities, or of things; but no one would call x the copy of an unknown quantity. But what is the meaning of Things being copies of Numbers, if they are Numbers in essence? The meaning we must seek in anterior explanations. We shall there find that Things are the *concrete existences of abstract Existence*; and that when Numbers are said to be the *principia*, it is meant that the forms of material things, the original essences, which remain invariable, are Numbers.* Thus a stone is one stone; as such it is a copy of One; it is the realisation of the abstract One into a concrete stone. Let the stone be ground to dust, and the particle of dust is still a copy, another copy of the One.

The reader will bear in mind that we have only a few mystical expressions, such as, 'Number is the principle of Things,' handed down to us as the doctrines of a thinker who created a considerable school, and whose influence on philosophy was undeniably immense. We have to interpret these expressions as we best can. Above all, we have to give them some appearance of plausibility; and this not so much an appearance of plausibility to modern thinkers as what would have been plausible to the ancients. Now, as far as we have familiarised ourselves with the antique modes of thought, our interpretation of Pythagoras is one which, if not the true, is at any rate very analogous to it: by such a logical process he *might* have arrived at his conclusions, and for our purpose this is almost the same as if he had arrived at them by it.

This history has but to settle two questions respecting

* Hence we must caution against supposing Pythagoras to have anticipated the theory of 'definite proportions.' Numbers are not the laws of combination, nor the expression of those laws, but the essences which remain invariable under every variety of combination.

Pythagoras: first, did he regard Numbers as symbols merely, or as entities? Second, if he regarded them as entities, how could he have arrived at such an opinion? The second of these questions has been answered in a hypothetical manner in the remarks just made; but of course the explanation is worthless if the first question be negatived, and to that question therefore we now turn. If we are to accept the authority of Aristotle, the question is distinctly and decisively answered, as we have seen, in favour of the reality of Numbers. It is true that doubts are thrown on the authority of Aristotle, who is said to have misunderstood or misrepresented the Pythagorean doctrine; but when we consider the comprehensiveness and exactness of Aristotle's mighty intellect; when we consider further that he had paid more than his usual attention to the doctrines of the Pythagoreans, having written a special treatise thereon, we shall be slow to reject any statement he may make, unless better evidence is produced; and where can better evidence be sought? Either we must accept Aristotle, or be silent on the whole matter; unless, indeed, we prefer—as many prefer—our own sagacity to his authority. It may be stated as a final consideration, that the view taken by the Stagirite is in perfect conformity with the opinions of Anaximander; so that, given the philosophy of the master, we might *à priori* deduce the opinions of the pupil.

The nature of this Work forbids any detailed account of the various opinions attributed to Pythagoras on subsidiary points. But we may instance his celebrated theory of the music of the spheres as a good specimen of the deductive method employed by him. Assuming that everything in the great Arrangement (*κόσμος*), which he called the world, must be harmoniously arranged, and assuming that the planets were at the same proportionate distances from one another as the divisions of the monochord, he concluded that in passing through the ether they must make a sound, and that this sound would vary according to the diversity of their magnitude, velocity, and relative distance. Saturn gave the

deepest tone, as being the furthest from the earth; the Moon gave the shrillest, as being nearest to the earth.

It may be necessary just to state that the attempt to make Pythagoras a Monotheist is utterly without solid basis, and unworthy of detailed refutation.

His doctrine of the Transmigration of Souls has been regarded as symbolical; with very little reason, or rather with no reason at all. He defined the soul to be a Monad (unit) which was self-moved.* Of course the soul, inasmuch as it was a number, was One, i. e. perfect. But all perfection, in as far as it is moved, must pass into imperfection, whence it strives to regain its state of perfection. Imperfection he called a departure from unity; two therefore was accursed.

The soul in man is in a state of comparative imperfection.† It has three elements, Reason (*νοῦς*), Intelligence (*φρόν*), and Passion (*θυμός*): the two last man has in common with brutes; the first is his distinguishing characteristic. It has hence been concluded that Pythagoras could not have maintained the doctrine of transmigration, his distinguishing man from brutes being a refutation of those who charge him with the doctrine.‡ The objection is plausible, and points out a contradiction; but there is abundant evidence for the belief that transmigration was taught.§ The soul, being a self-moved monad, is One, whether it connect itself with two or with three; in other words the essence remains the same whatever its manifestations. The One soul may have two aspects, Intelligence and Passion, as in brutes; or it may have the three aspects, as in man. Each of these aspects may predominate, and the man will then become eminently rational, or able, or sensual. He will be a philosopher, a man of the world, or a beast. Hence the importance of the

* ARISTOT., *De Animâ*, i. 2.

† Thus Aristotle expresses himself when he says that the Pythagoreans maintained the soul and intelligence to be a certain combination of numbers, τὸ δὲ τοιοῦτον (sc. τῶν ἀριθμῶν πᾶθος) ψυχὴ καὶ νοῦς.—*Metaph.*, i. 5.

‡ PIERRE LEROUX, *De l'Humanité*, i. 390–426.

§ PLATO distinctly mentions the transmigration into beasts.—*Phædrus*, p. 45. And the Pythagorean Timæus, in his statement of the doctrine, also expressly includes beasts.—*Timæus*, p. 45.

Pythagorean initiation, and of the studies of Mathematics and Music.

‘This soul, which can look before and after, can shrink and shrivel itself into an incapacity of contemplating aught but the present moment. Of what depths of degeneracy it is capable! What a beast it may become! And if something lower than itself, why not something higher? And if something higher and lower, may there not be a law accurately determining its elevation and descent? Each soul has its peculiar evil tastes, bringing it to the likeness of different creatures beneath itself; why may it not be under the necessity of abiding in the condition of that thing to which it had adapted and reduced itself?’*

In closing this account of a very imperfectly-known doctrine, we have only further to exhibit its relation to the preceding philosophy. It is clearly an offshoot of Anaximander's doctrine, which it develops in a logical manner. In Anaximander there remained a trace of concrete physical inquiry; in Pythagoras inquiry is purely mathematical. Assuming that Number is the real invariable essence of the world, it was a natural deduction that the world is regulated by numerical proportions; and from this all the rest of his system followed as a consequence. Anaximander's system is but a rude and daring sketch of a doctrine which the great mathematical genius of Pythagoras developed. The Infinite of Anaximander became the One of Pythagoras. Observe that in neither of these systems is Mind an attribute of the Infinite. It has been frequently maintained that Pythagoras taught the doctrine of a ‘soul of the world.’ But there is no solid ground for the opinion, any more than for that of his Theism, which later writers anxiously attributed to him. The conception of an Infinite Mind is much later than Pythagoras. He only regarded Mind as a phenomenon; as the peculiar manifestation of an essential number: and the proof of this assertion we take to lie in his very doctrine of the soul. If the Monad, which is self-moved, can pass into

* MAURICE, *Moral and Metaphysical Philosophy*.

the state of a brute or of a plant, in which state it successively loses its Reason (*νοῦς*) and its Intelligence (*φρόν*) to become merely sensual and concupiscible, does not this abdication of Reason and Intelligence distinctly prove them to be only variable manifestations (phenomena) of the invariable Essence? Assuredly; and those who argue for the Soul of the World as an Intelligence in the Pythagorean doctrine, must renounce both the doctrine of transmigration and the central doctrine of the system, the invariable Number as the Essence of things.

Pythagoras represents the second epoch of the second Branch of Ionian Philosophy; he is parallel with Anaximenes.

Translations from the 5th Chapter of Book I. of Aristotle's Metaphysics.

'In the age of these philosophers [the Eleats and Atomists], and even before them, lived those called Pythagoreans, who at first applied themselves to mathematics, a science they improved; and, having been trained exclusively in it, they fancied that the principles of mathematics were the principles of all things.

'Since numbers are by nature *prior* to all things, in Numbers they thought they perceived greater analogies with that which exists and that which is produced (*ὁμοιώματα πολλὰ τοῖς οὖσι καὶ γιγνομένοις*) than in fire, earth, or water. So that a certain combination of Numbers was justice; and a certain other combination of Numbers was Reason and Intelligence; and a certain other combination of Numbers was opportunity (*καιρός*); and so of the rest.

'Moreover they saw in Numbers the combinations of harmony. Since therefore all things seemed formed similarly to Numbers, and Numbers being by nature anterior to things, they concluded that the elements (*στοιχεῖα*) of Numbers are the elements of things, and that the whole heaven is a harmony and a Number. Having indicated the great ana-

logies between Numbers and the phenomena of heaven and its parts, and with the phenomena of the whole world (*τῇν ὅλην διακόσμησιν*) they formed a system; and if any gap was apparent in the system, they used every effort to restore the connection. Thus, since Ten appeared to them a perfect number, potentially containing all numbers, they declared that the moving celestial bodies (*τὰ φερόμενα κατὰ τὸν οὐρανόν*) were ten in number; but because only nine are visible they imagined (*ποιοῦσι*) a tenth, the *Antichthone*.

'We have treated of all these things more in detail elsewhere. But the reason why we recur to them is this—that we may learn from *these* philosophers also what they lay down as their first principles, and by what process they hit upon the causes aforesaid.

'They maintained that Number was the Beginning (Principle, *ἀρχή*) of things, the cause of their material existence, and of their modifications and different states. The elements (*στοιχεῖα*) of Number are Odd and Even. The Odd is finite, the Even Infinite. Unity, the One, partakes of both these, and is both Odd and Even. All number is derived from the One. The heavens, as we said before, are composed of numbers. Other Pythagoreans say there are ten Principia, those called co-ordinates:—

The finite and the infinite.

The odd and the even.

The one and the many.

The right and the left.

The male and the female.

The quiescent and the moving.

The right line and the curve.

Light and darkness.

Good and evil.

The square and the oblong.

'... All the Pythagoreans considered the elements as material; for the elements are in all things, and constitute the world. ...

'... The finite, the infinite, and the One they maintained

to be not separate existences, such as are fire, water, etc.; but the abstract Infinite and the abstract One are respectively the substance of the things of which they are predicated, and hence, too, Number is the substance of all things (*αὐτὸ τὸ ἀπειρον, καὶ αὐτὸ τὸ ἓν, οὐσίαν εἶναι τούτων*). They began by attending only to the *Form*, and began to define it; but on this subject they were very imperfect. They define superficially; and that which suited their definition they declared to be the essence (*causa materialis*) of the thing defined; as if one should maintain that the double and the number two are the same thing, because the double is first found in the two. But two and the double are not equal (in essence), or if so, then the one would be many; a consequence which follows from their (the Pythagorean) doctrine.'

(Here also a passage from the 7th Chapter of the same Book.)

'The Pythagoreans employ the Principia and Elements more strangely than even the Physiologists; the cause of which is that they do not take them from sensible things (*αὐτὰς οὐκ ἐξ αἰσθητῶν*). However all their researches are physical; all their systems are physical. They explain the production of heaven, and observe that which takes place in its various parts, and its revolutions; and thus they employ their Principles and Causes, as if they agreed with the Physiologists, that whatever *is* is *material* (*αἰσθητόν*), and is that which contains what we call heaven.

'But their Causes and Principles we should pronounce sufficient (*ἱκανάς*) to raise them up to the conception of Intelligible things—of things above sense (*ἐπαναβῆναι καὶ ἐπὶ τὰ ἀνωτέρω τῶν ὄντων*); and would accord with such a conception much better than with that of physical things.'

This criticism of Aristotle's is a refutation of those who see in Pythagoras the traces of symbolical doctrine. Aristotle sees how much more rational the doctrine would have been had it been symbolical; but this very remark proves that it was not so.

CHAPTER III.

THE ELEATICS.

§ I. XENOPHANES.

THE contradictory statements which so long obscured the question of the date of Xenophanes' birth, may now be said to be satisfactorily cleared up. M. Victor Cousin's essay on the subject will leave few readers unconvinced.* We may assert therefore with some probability, that Xenophanes was born in the 40th Olympiad (B. C. 620-616), and that he lived nearly a hundred years. His birth-place was Colophon, an Ionian city of Asia Minor; a city long famous as the seat of elegiac and gnomic poetry; the poet Mimnermus was among its celebrated men. Xenophanes cultivated poetry from youth upwards; it was the joy of his youth, the consolation of his manhood, and support of his old-age. Banished from his native city, he wandered over Sicily as a Rhapsodist;† a profession he exercised apparently till his death, though, if we are to credit Plutarch, with very little pecuniary benefit. He lived poor, and died poor. But he could dispense with riches, having within him treasures inexhaustible: his soul was absorbed in the contemplation of grand ideas, and his vocation was the poetical expression of those ideas. He had no pity for the idle and luxurious superstitions of his time; he had no tolerance for the sunny legends of Homer, defaced as they were by the errors of polytheism.

* COUSIN: *Nouveaux Fragmens Philosophiques*. See also KARSTEN: *Xenophanis Carminum Reliquiæ*.

† The Rhapsodists were the Minstrels of antiquity. They learned poems by heart, and recited them to assembled crowds on the occasions of feasts. Homer was a rhapsodist, and rhapsodised his own verses.

He, a poet, was fierce in the combat he perpetually waged with the first of poets: not from petty envy; not from petty ignorance; but from the deep sincerity and enthusiasm of reverence. He who believed in one God, supreme in power, goodness, and intelligence, could not witness without pain the degradation of the Divine in the common religion. Alive to the poetic beauty of the Homeric fables, he was also keenly alive to their religious falsehood. Plato, whom none will accuse of wanting poetical taste, had the same feeling. The latter portion of the second and the beginning of the third books of Plato's *Republic* are but expansions of these verses of Xenophanes:—

Such things of the Gods are related by Homer and Hesiod
As would be shame and abiding disgrace to any of mankind;
Promises broken, and thefts, and the one deceiving the other.

He who firmly believed in

One God, of all beings divine and human the greatest,
Neither in body alike unto mortals, neither in spirit,*

could not but see, 'more in sorrow than in anger,' the gross anthropomorphism of his fellows:—

But men foolishly think that Gods are born like as men are,
And have too a dress like their own, and their voice and their figure:
But if oxen and lions had hands like ours, and fingers,
Then would horses like unto horses, and oxen to oxen,
Paint and fashion their god forms, and give to them bodies
Of like shape to their own, as they themselves too are fashioned.†

In confirmation of which satire he referred to the Ethiopians, who represent their gods with flat noses and black

* This is too important a position to admit of our passing over the original:—

Εἷς θεὸς ἐν τε θεοῖσι καὶ ἀνθρώποισι μέγιστος,
Οὐτε δέμας θνητοῖσιν ὁμοῖος οὐτε νόημα.—*Fragm. i.*, ed. KARSTEN.

WIGGERS, in his *Life of Socrates*, expresses his surprise that Xenophanes was allowed to speak so freely respecting the State Religion in Magna Græcia, when philosophical opinions much less connected with religion had proved so fatal to Anaxagoras in Athens. But the apparent contradiction is perhaps reconciled when we remember that Xenophanes was a poet, and poets have in all ages been somewhat privileged persons.

† Fragments v. and vi. are here united, as in Ritter; the sense seems to demand this conjunction. But Clemens Alexandrinus quotes the second Fragment as if it occurred in another part of the poem; introducing it with καὶ πάλιν φησὶ, 'and again he says.'—KARSTEN, p. 41.

complexions; while the Thracians give them blue eyes and ruddy complexions.

Having attained a clear recognition of the unity and perfection of the Godhead, it became the object of his life to spread that conviction abroad, and to tear down the thick veil of superstition which hid the august countenance of truth. He looked around him, and saw mankind divided into two classes: those who speculated on the nature of things, endeavouring to raise themselves up to a recognition of the Divine; and those who yielded an easy unreflecting assent to the superstitions which composed religion. The first class kept their speculations to themselves, and to a small circle of disciples. If they sought truth, it was not to communicate it to all minds; they did not work for humanity, but for the few. Even Pythagoras, earnest thinker as he was, could not be made to believe in the fitness of the multitude for truth. He had two doctrines to teach: one for a few disciples, whom he chose with extreme caution; the other for those who pleased to listen. The former doctrine was what he believed the truth; the latter was what he thought the masses were fitted to receive. Xenophanes recognised no such distinction. Truth was for all men; to all men he endeavoured to present it; and for three-quarters of a century he, the great rhapsodist of Truth, emulated his countryman Homer, the great rhapsodist of Beauty, and wandered into many lands, uttering the thought which was working in him. What a contrast is presented by these two Ionian singers! contrast in purpose, in means, and in fate. The rhapsodies of the philosopher, once so eagerly listened to and affectionately preserved in traditionary fragments, are now only extant in briefest extracts contained in ancient books, so ancient and so uninteresting as to be visited only by some rare scholars and a few *dilettanti* spiders; while the rhapsodies of the blind singer are living in the brain and heart of thousands and thousands, who go back to them as the fountain-source of poetry, the crystal mirror of an antique world.

The world presented itself to Homer in pictures, to Xenophanes in problems. The one saw Nature, enjoyed it, and painted it. The other also saw Nature, but questioned it, and wrestled with it. Every trait in Homer is sunny clear; in Xenophanes there is indecision, confusion. In Homer there is a resonance of gladness, a sense of manifold life, activity, and enjoyment. In Xenophanes there is bitterness, activity of a spasmodic sort, infinite doubt, and infinite sadness. The one was a poet singing as the bird sings, carolling for very exuberance of life; the other was a thinker, and a fanatic. He did not sing, he recited:

Ah! how unlike
To that large utterance of the early Gods!

That the earnest philosopher should have opposed the sunny poet, opposed him even with bitterness, on account of the degraded actions and motives which he attributed to the Gods, is natural; but we must distinguish between this opposition and satire. Xenophanes was bitter, not satirical. The statement derived from Diogenes, that he wrote satires against Homer and Hesiod, is erroneous.*

Rhapsodising philosophy, and availing himself, for that purpose, of all that philosophers had discovered, he wandered from place to place, and at last came to Elea, where he settled. Hegel questions this statement: he says he finds no distinct mention of such a fact in any of the ancient writers; on the contrary, Strabo, in his sixth book, when describing Elea, speaks of Parmenides and Zeno as having lived there, but is silent respecting Xenophanes; which Hegel holds to be suspicious. Indeed the words of Diogenes Laertius are vague. He says, 'Xenophanes wrote two thousand verses on the foundation of Colophon, and on a colony sent to Elea.' This by no means implies that he

* Γέγραφε δὲ καὶ ἐν ἔπεσιν, καὶ ἐλεγείας, καὶ ἰάμβους κατὰ Ἡσιόδου καὶ Ὀμήρου. Here, says M. Cousin, the word *ἰάμβους* is either an interpolation of a copyist, as Feurlin and Rossi conjecture, or else it is a mis-statement by Diogenes. There is not a single iambic verse of his remaining. But in his hexameters he opposes Homer and Hesiod, as we have seen.

lived there. Nevertheless modern writers, from the various connections with the Eleatics observable in his fragments, maintain that he must actually have resided there. Be that as it may, Xenophanes terminated a long and active life without having solved the great problem. The indecision of his acute mind sowed the seeds of that scepticism which was hereafter to play so large a part in philosophy. All his knowledge enabled him only to know how little he knew. His state of mind is finely described by Timon the sillograph, who puts into the mouth of Xenophanes these words:—

Oh that mine were the deep mind, prudent and looking to both sides!
Long, alas! have I strayed on the road of error, beguiled,
And am, now, hoary of years, yet exposed to doubt and distraction
Manifold, all-perplexing, for whithersoever I turn me
I am lost in the *One and All*.—(εἰς ἐν ταῦτό τε πᾶν ἀνελύετο.) *

It now remains for us to state some of the conclusions at which this great man arrived. They will not, perhaps, answer to the reader's expectation; the reputation for extraordinary wisdom seems ill justified by the fragments of that wisdom which have descended to us. But although to modern philosophy the conclusions of early thinkers may appear trivial, let us never forget that it is to these early thinkers that we owe our modern philosophy. Had there not been many a

Grey spirit yearning in desire
To follow knowledge, like a sinking star,
Beyond the utmost bound of human thought,

we should not have been able to travel on the secure terrestrial path of slow inductive science. The impossible has to be proved impossible, before men will consent to limit their endeavours to the compassing of the possible. And it was the cry of despair which escaped from Xenophanes, the cry that nothing can be certainly known, which first called men's attention to the nothingness of knowledge, as knowledge was then conceived. Xenophanes opens a series of thinkers, which attained its climax in Pyrrho. That he should thus

* Preserved by SEXTUS EMPIRICUS: *Hypot. Pyrrhon.* i. 224; and quoted by RITTER, i. 443.

have been at the head of the monotheists, and at the head of the sceptics, is sufficient to entitle his speculations to an extended consideration here.

§ II. THE PHILOSOPHY OF XENOPHANES.

The great problem of existence had early presented itself to his mind; and the resolution of that problem by Thales and Pythagoras had left him unsatisfied. Neither the physical nor the mathematical explanation could still the doubts which rose within him. On all sides he was oppressed with mysteries, which these doctrines could not penetrate. The state of his mind is graphically painted in that one phrase of Aristotle's: 'Casting his eyes upwards at the immensity of heaven, he declared that The One is God.' Overarching him was the deep blue, infinite vault, immovable, unchangeable, embracing him and all things; *that* he proclaimed to be God. As Thales had gazed abroad upon the sea, and felt that he was resting on its infinite bosom, so Xenophanes gazed above him at the sky, and felt that he was encompassed by it. Moreover it was a great mystery, inviting yet defying scrutiny. The sun and moon whirled to and fro through it; the stars were

Pinnacled dim in its intense inane.

The earth was constantly aspiring to it in the shape of vapour; the souls of men were perpetually aspiring to it with vague yearnings. It was the centre of all existence; it was Existence itself. It was The One—the Immovable, on whose bosom the Many were moved.

Is not this the explanation of that opinion universally attributed to him, but always variously interpreted, 'God is a sphere'? The Heaven encompassing him and all things, was it not The One Sphere which he proclaimed to be God?

It is very true that this explanation does not exactly accord with his physics, especially with that part which relates to the earth being a flat surface whose inferior regions

are infinite—by which he explained the fixity of the earth. M. Cousin, in consequence of this discrepancy, would interpret the phrase as metaphorical. 'The epithet *spherical* is simply a Greek locution to indicate the perfect equality and absolute unity of God, and of which a sphere may be an image. The *σφαιρικός* of the Greeks is the *rotundus* of the Latins. It is a metaphorical expression such as that of *square*, meaning *perfect*; an expression which, though now become trivial, had at the birth of mathematical science something noble and elevated in it, and is found in most elevated compositions of poetry. Simonides speaks of a "man square as to his feet, his hands, and his mind," meaning an accomplished man; and the metaphor is also used by Aristotle. It is not therefore surprising that Xenophanes, a poet as well as a philosopher, writing in verse, and incapable of finding the metaphysical expression which answered to his ideas, should have borrowed from the language of imagination the expression which would best render his idea.'

We should be tempted to adopt this explanation could we be satisfied that the Physics of Xenophanes were precisely what it is said they were, or that they were such at the epoch in which he maintained the sphericity of God. This latter difficulty is insuperable, but has been unobserved by all critics. A man who lives a hundred years necessarily changes his opinions on such subjects; and when opinions are so lightly grounded as were those of philosophers at that epoch, it is but natural to admit that the changes may have been frequent and abrupt. In this special instance, scholars have been aware of the very great and irreconcilable contradictions existing between certain opinions equally authentic; showing him to have been decidedly Physical in one department, and as decidedly Mathematical in another.

As to the case in point, Aristotle's express statement of Xenophanes having 'looked up at heaven, and pronounced The One to be God,' is manifestly at variance with any belief in the infinity of the lower regions of the earth. The One must be the Infinite.

To return, however, to his Monotheism, or more properly Pantheism, which is the greatest peculiarity of his doctrine: he not only destroyed the notion of a multiplicity of Gods, but he proclaimed the Self-existence and Intelligence of The One.

God must be Self-existent; for to conceive Being as incipient is impossible. Nothing can be produced from Nothing. Whence, therefore, was Being produced? From itself? No; for then it must have been already in existence to produce itself, otherwise it would have been produced from nothing. Hence the primary law: Being is self-existent. If self-existent, consequently eternal.

As in this it is implied that God is all-powerful and all-wise and all-existent, a multiplicity of Gods is inconceivable.

It also follows that God is immovable, when considered as The All:—

Wholly unmoved and unmoving it ever remains in the same place,
Without change in its place when at times it changes appearance.

The All must be unmoved; there is nothing to move it. It cannot move itself; for to do so it must be external to itself.

We must not suppose that he denied motion to finite things because he denied it to the Infinite. He only maintained that The All was unmoved. Finite things were moved by God: 'without labour he ruleth all things by reason and insight.' His monotheism was carefully distinguished from anthropomorphism, as the verses previously quoted have already exemplified. Let us only further remark on the passage in Diogenes Laertius, wherein he is said to have maintained that 'God did not resemble man, for he heard and saw all things without *respiration*.' This is manifestly an allusion to the doctrine of Anaximenes that the soul was air. The intelligence of God, being utterly unlike that of man, is said to be independent of respiration.*

* Only by thus connecting one doctrine with another can we hope to understand ancient philosophy. It is in vain that we puzzle ourselves with the attempt to penetrate the meaning of these antique fragments of thought unless we view them in relation to the opinions of their epoch.

It is necessary to caution the reader against the supposition that by the One God Xenophanes meant a Personal God distinct from the universe. He was a monotheist in contradistinction to his polytheistical contemporaries; but his monotheism was pantheism. Indeed this point would never have been doubted, notwithstanding the ambiguity of language, if moderns had steadily kept before their minds the conceptions held by the Greeks of their Gods as personifications of the Powers of Nature. When Xenophanes argued against the polytheism of his contemporaries, he argued against their personifying as distinct deities the various aspects of The One; he was wroth with their degradation of the divine nature by assimilating it to human nature, by making these powers *persons*, and independent existences—conceptions irreconcilable with that of the unity of God. He was a monotheist therefore, but his monotheism was pantheism; he could not separate God from the world, which was merely the manifestation of God; He could not conceive God as the One Existent, and admit the existence of a world *not* God. There could be but One Existence with many modes; that one was God.

There is another tenet of almost equal importance in his system, and one which marks the origin of that sceptical philosophy which we shall see henceforward running through all the evolutions of this history, always determining a crisis in speculation. Up to the time of Xenophanes philosophy was unsuspectingly dogmatical; it never afterwards recovered that simple position. He it was who began to doubt, and to confess the incompetence of Reason to solve doubts and compass the exalted aims of philosophy. Yet the doubt was moral rather than psychological. It was no systematic scepticism: an earnest spirit struggling after Truth, whenever he obtained, or thought he obtained, a glimpse of her celestial countenance he proclaimed his discovery, however it might contradict what he had before announced. Long travel, various experience, examination of different systems, new and contradictory glimpses of the problem he was

desirous of solving—these working together produced in his mind a scepticism of a noble, somewhat touching sort, wholly unlike that of his successors. It was the combat of contradictory opinions in his mind, rather than disdain of knowledge. His faith was steady, his opinions vacillating. He had a profound conviction of the existence of an eternal, all-wise, infinite Being; but this belief he was unable to reduce to a consistent formula. There is deep sadness in these verses:—

Surely never hath been, nor ever shall be a mortal
Knowing both well the Gods and the All, whose nature we treat of;
For when by chance he at times may utter the true and the perfect,
He wists not unconscious; for error is spread over all things.

In vain M. Cousin attempts to prove that these verses are not sceptical; many of the recorded opinions of Xenophanes are of the same tendency. The man who had lived to find his most cherished convictions turn out errors, might well be sceptical of the truth of any of his opinions. But this scepticism was vague; it did not prevent his proclaiming what he held to be the truth; it did not prevent his search after truth.

For although Truth could never be compassed in its totality by man, glimpses could be caught. Ἀλλὰ χρόνῳ ζητοῦντες ἐφευρίσκουσιν ἄμεινον: we cannot indeed be certain that our knowledge is absolute; we can only strive our utmost, and believe our opinions to be probable. This is not scientific scepticism; it does not ground itself on an investigation of the nature of Intelligence and the sources of our knowledge: it grounds itself solely on the perplexities into which philosophy is thrown. Thus reason (i.e. the logic of his day) taught him that God the Infinite could not be infinite, neither could he be finite. Not infinite, because non-being alone, as having neither beginning, middle, nor end, is unlimited (infinite). Not finite, because one thing can only be limited by another, and God is one, not many.

In like manner did logic teach him that God was neither moved nor unmoved. Not moved, because one thing can

only be moved by another, and God is one, not many; not unmoved, because non-being alone is unmoved, inasmuch as it neither goes to another, nor does another come to it.

With such verbal quibbles as these did this great thinker darken his conception of the Deity. They were not quibbles to him; they were the real conclusions involved in the premises from which he reasoned. To have doubted their validity would have been to doubt the possibility of philosophy. He was not quite prepared for that; and Aristotle in consequence calls him 'somewhat clownish,' ἀγροικότερος (*Met.* i. 5); meaning that his conceptions were rude and undigested, instead of being systematised.

Although in the indecision of Xenophanes we see the germs of later scepticism, we are disposed to agree with M. Cousin in discrediting his absolute scepticism—resting on the incomprehensibility of all things—ἀκαταληψία πάντων. Nevertheless some of M. Cousin's grounds appear to us questionable.*

The reader will, perhaps, have gathered from the foregoing, that Xenophanes was too much in earnest to believe in the incomprehensibility of all things, however the contradictions of his logic might cause him to suspect his own and other people's conclusions. Of course, if carried out to their legitimate consequences, his principles lead to absolute scepticism; but he did not so carry them out, and we have no right to charge him with consequences which he himself did not draw. Indeed, it is one of the greatest and commonest of polemical errors, to charge the originator or supporter of a doctrine with consequences which he did not see, or would not have accepted had he seen them. Because they may be contained in his principles, it by no means

* E. g. he says: 'It appears that Sotion, according to Diogenes, attributed to Xenophanes the opinion, all things are incomprehensible; but Diogenes adds that Sotion was wrong on that point.' (*Fragmens*, p. 89.) Now this is altogether a mis-statement. Diogenes says: 'Sotion pretends that no one before Xenophanes maintained the incomprehensibility of all things, but he is wrong.' Diogenes here does not deny that Xenophanes held the opinion, but that any one held it before him.

follows that he saw them. A man would be ridiculed if he attributed to the discoverer of any law of nature the various discoveries which the application of that law might have produced; nevertheless these applications were all potentially existing in the law; but as the discoverer of the law was not aware of them, he does not get the credit. Why, then, should a man have the *dis-credit* of consequences contained, indeed, in his principles, but which he himself could not see? On the whole, although Xenophanes was not a clear and systematic thinker, it cannot be denied that he exercised a very remarkable influence on the progress of speculation; as we shall see in his successors.

§ III. PARMENIDES.

The readers of Plato will not forget the remarkable dialogue in which he pays a tribute to the dialectical subtlety of Parmenides; but we must at the outset caution them against any belief in the genuineness of the opinions attributed to him by Plato. If Plato could reconcile himself to the propriety of altering the sentiments of his beloved master, Socrates, and of attributing to him such as he had never entertained; with far greater reason could he put into the mouth of one long dead, sentiments which were the invention of his own dramatic genius. Let us read the *Parmenides*, therefore, with extreme caution; let us prefer the authority of Aristotle and the verses of Parmenides which have been preserved.

Parmenides was born at Elea, somewhere about the 61st Olympiad (B.C. 536). This date does not contradict the rumour which, according to Aristotle, asserted him to have been a disciple of Xenophanes, whom he might have listened to when that great rhapsodist was far advanced in years. The most positive statement, however, is that by Sotion, of his having been taught by Ameinias and Diochætes the Pythagorean. But both may be true.

Born to wealth and splendour, enjoying the esteem and

envy which always follow splendour and talents, it is conjectured that his early career was that of a dissipated voluptuary; but Diochætes taught him the nothingness of wealth (at times, perhaps, when satiety had taught him the nothingness of enjoyment), and led him from the dull monotony of noisy revelry to the endless variety and excitement of philosophic thought. He forsook the feverish pursuit of enjoyment, to contemplate 'the bright countenance of Truth, in the quiet and still air of delightful studies.'* But this devotion to study was no selfish seclusion. It did not prevent his taking an active share in the political affairs of his native city. On the contrary, the fruits of his study were shown in a code of laws which he drew up, and which were deemed so wise and salutary, that the citizens at first yearly renewed their oath to abide by the laws of Parmenides.

And something greater did his worth obtain,
For fearless virtue bringeth boundless gain.

The first characteristic of his philosophy, is the decided distinction between Truth and Opinion: in other words, between the ideas obtained through the Reason, and those obtained through Sense. In Xenophanes we noticed a vague glimmering of this notion; in Parmenides it attained to something like clearness. In Xenophanes it contrived to throw an uncertainty over all things; which, in a logical thinker, would have become absolute scepticism. But he was saved from scepticism by his moral earnestness. Parmenides was saved from it by his philosophy. He was perfectly aware of the deceitful nature of opinion; but he was also aware that within him there were certain ineradicable convictions, in which, like Xenophanes, he had perfect faith, but which he wished to explain by reason. Thus was he led in some sort to anticipate the celebrated doctrine of *innate ideas*. These ideas were concerning necessary truths; they were true knowledge; all other ideas were uncertain.

The Eleatics, as Ritter remarks, believed that they recognised and could demonstrate that the truth of all things is

* MILTON.
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one and unchangeable; perceiving, however, that human thought is constrained to follow the appearance of things, and to apprehend the changeable and the many, they were forced to confess that we are unable fully to comprehend the divine truth in its reality, although we may rightly apprehend a few general principles. Nevertheless, to suppose, in conformity with human thought, that there is actually both a plurality and a change, would be but a delusion of the senses. While, on the other hand, we must acknowledge, that in all that appears to us as manifold and changeable, including all particular thought as evolved in the mind, the Godlike is present, unperceived indeed by human blindness, and become, as it were beneath a veil, indistinguishable.

We may make this conception more intelligible if we recall the mathematical tendency of the whole of this school. The knowledge of Physics was regarded as contingent—delusive. The knowledge of Mathematics eternal—self-evident. Parmenides was thus led by Xenophanes on the one hand, and Diocætes on the other, to the conviction of the duality of human thought. His Reason, i. e. the Pythagorean logic, taught him that there is nought existing but The One (which he did not, with Xenophanes, call God; he called it Being). His Sense, on the other hand, taught him, that there were Many Things, because of his manifold sensuous impressions. Hence he maintained two Causes and two Principles: the one to satisfy the Reason; the other to accord with the explanations of Sense. His work on 'Nature' was therefore divided into two parts: in the first is expounded the absolute Truth, as Reason proclaims it; in the second, human Opinion, accustomed to

Follow the rash eye, and ears with singing sounds confused, and tongue,

which is but a mere *seeming* (δόξα, appearance); nevertheless there is a cause of this seeming; there is also a principle, consequently there is a doctrine appropriate to it.

It must not be imagined, that Parmenides had a mere vague and general notion of the uncertainty of human know-

ledge. He maintained that thought was delusive because dependent upon organisation. He had as distinct a conception of this celebrated theory as any of his successors; this may be seen in the passage preserved by Aristotle in the 5th chapter of the 4th book of his *Metaphysics*, where, speaking of the materialism of Democritus, in whose system sensation was thought, he adds, that others have shared this opinion, and proceeds thus: 'Empedocles affirms, that a change in our condition (τὴν ἕξιν) causes a change in our thought.

Thought grows in men according to the impression of the moment; *

and, in another passage, he says:—

It is always according to the changes which take place in men
That there is change in their thoughts.

Parmenides expresses himself in the same style:

Such as to each man is the nature of his many-jointed limbs,
Such also is the intelligence of each man; for it is
The nature of limbs (organization) which thinketh in men.
Both in one and in all; the highest degree of organization gives the
highest degree of thought.†

Now, as thought was dependent on organisation, and as each organisation differed in degree from every other, so

* Πρὸς παρεὶν γὰρ μῆτις ἀέξεται ἀνθρώποισι.

† The last sentence, 'the highest degree of organization gives the highest degree of thought,' is a translation for which, differing from that of every other I have seen, and being, as I believe, of some importance in the interpretation of Parmenides' system, it is necessary to state my reasons. Here is the original of the verses in the text:—

Ὡς γὰρ ἕκαστος ἔχει κρᾶσιν μελέων πολυκάμπτων,
Τὼς νόος ἀνθρώποισι παρέστηκεν. Τὸ γὰρ αὐτὸ
Ἔστιν ὅπερ φρονέει μελέων φύσις ἀνθρώποισι,
Καὶ πᾶσιν, καὶ παντί· τὸ γὰρ πλεόν ἐστὶ νόημα.

The last sentence RITTER translates:—

For thought is the fulness.

(Objecting to HEGEL's version of τὸ πλεόν, 'the most,' and to that of BRANDIS 'the mightier,' Ritter says the meaning is 'the full.' But we shall then want an interpretation of 'the full.' What is it? He elsewhere slightly alters the phrase thus:—

'The fulness of all being is thought.'

I speak with submission, but it appears to me that Ritter's assertion respecting τὸ πλεόν meaning 'the full,' or 'the fulness,' is unwarrantable. The ordinary

would the opinions of men differ. If thought be sensation, we require but little reflection to see, that, as sensations from the same object differ according to the senses of different persons, and indeed differ at different times with the same person, therefore one opinion is not more true than another, and all are equally false. But Reason is the same in all men: that alone is the fountain of certain knowledge. All thought derived from sense is but a *seeming* (δόξα); but thought derived from Reason is absolutely true. Hence his antithesis to δόξα is always πίστις, *faith*.

This is the central point in his system. He was thereby enabled to avert absolute scepticism, and at the same time to admit the uncertainty of ordinary knowledge. He had therefore two distinct doctrines, each proportioned to the faculty adapted to it. One doctrine, of Absolute Knowledge (Metaphysics, μετὰ τὰ φυσικά), with which the faculty of pure Reason was concerned, a doctrine called in the language of that day, the 'Science of Being.' The other doctrine, of Relative Knowledge, or Opinion (Physics, τὰ φυσικά), with

meaning is certainly 'the more,' or 'the most,' and hence used occasionally to signify *perfection*, as in THEOCRITUS:—

Καὶ τὰς βακολικὰς ἐπὶ τὸ πλεόν ἵκεο μῶσας.—*Idy.* i. 20.

When Parmenides, therefore, uses the phrase τὸ πλεόν ἐστὶ νόημα, he seems to us to have the ordinary meaning in view; he speaks of τὸ πλεόν as a necessary consequence of the πολυκάμπτος. Man has many-jointed limbs, *ergo* many sensations; if he had more limbs he would have more sensations; the highest degree of organisation gives the highest degree of thought. This explanation is in conformity with what Aristotle says on introducing the passage; is in conformity with the line immediately preceding:—

Ἔστιν ὅπερ φρονέει μελέων φύσις ἀνθρώποισι;

is in conformity with the explanation of the scholiast ASCLEPIAS, τὸ πλεόν ἐστὶ νόημα, προσγίγνεται ἐκ τῆς πλεονος αἰσθήσεως καὶ ἀκριβεστέρας; and, finally, is in conformity with the opinion attributed to Parmenides by Plutarch, that 'sentir et penser ne lui paraissaient choses distinctes, ni entre elles ni de l'organisation.'¹

It is on this account I reject the reading of πλανήδων, 'far-wandering,' in place of πολυκάμπτων, 'many-jointed,' suggested by KARSTEN. The change is arbitrary and for the worse; πολυκάμπτων having reference only to the feet, whereas the simile in Parmenides is meant to apply to the whole man.

The meaning of the verses is, therefore, that the intelligence of man is formed according to his many-jointed frame, i.e. dependent on his organisation.

¹ CH. RENOUVIER: *Manuel de la Philosophie Ancienne*, i. 152, who cites PLUTARCH: *Opin. des Philos.* iv. 5.

which the faculty of Intelligence, or Thought, derived from Sense, was concerned, and which may be called the science of Appearance.

On the science of Being, Parmenides did not differ much from his predecessors, Xenophanes and Pythagoras. He taught that there was but one Being; non-Being was impossible. The latter assertion amounts to saying that non-existence cannot exist: a position which may appear extremely trivial to the reader not versed in metaphysical speculations; but which we would not have him despise, inasmuch as it is a valuable piece of evidence respecting the march of human opinion. It is only one of the many illustrations of the tendency to attribute positive qualities to words, as if they were *things*, and not simply *marks* of things: a tendency admirably exposed by James Mill, and subsequently by his son.* It was this tendency which so greatly puzzled the early thinkers, who, when they said that 'a thing *is* not,' believed that they nevertheless predicated existence, viz. the existence of non-existence. A thing *is*; and a thing *is* not; these two assertions seemed to be affirmations of two different states of existence; an error from which, under some shape or other, later thinkers have not always been free.

Parmenides, however, though affirming that Being alone existed, and that non-Being was impossible, did not see the real ground of the sophism. He argued that Non-Being could not be, because Nothing can come out of Nothing (as Xenophanes taught him); if therefore Being existed, it must embrace all existence.

Hence he concluded that The One was all Existence, iden-

* 'Many volumes might be filled with the frivolous speculations concerning the nature of Being (τὸ ὄν, οὐσία, *Ens*, *Entitas*, *Essentia*, and the like), which have arisen from overlooking this double meaning of the words *to be*; from supposing that when it signifies *to exist*, and when it signifies *to be* some specified thing, as *to be* a man, *to be* Socrates, *to be* seen, *to be* a phantom, or even *to be* a nonentity, it must still at the bottom answer to the same idea; and that a meaning must be found for it which shall suit all these cases.'—JOHN MILL, *System of Logic*, i. 4, *first ed.*

tical, unique, neither born nor dying, neither moving nor changing. It was a bold step to postulate the finity of The One, Xenophanes having declared it to be necessarily infinite. But there is abundant evidence to prove that Parmenides regarded The One as finite. Aristotle speaks of it as the distinction between Parmenides and Melissus: 'The unity of Parmenides was a *rational* unity (τοῦ κατὰ λόγον ἑνός); that of Melissus was a *material* unity (τοῦ κατὰ τὴν ὕλην). Hence the former said that The One was finite (πεπερασμένον), but the latter said it was infinite (ἄπειρον).' From which it appears that the ancients conceived the Rational unity as limited by itself; a conception it is difficult for us to understand. Probably it was because they held The One to be spherical: all the parts being equal: having neither beginning, middle, nor end: and yet self-limited.

The conception of the identity of thought and existence is expressed in some remarkable verses by Parmenides, of which, as a very different interpretation has been drawn from them, we shall give a literal translation.

Thought is the same thing as the cause of thought :
 For without the thing in which it is announced
 You cannot find the thought ; for there is nothing, nor shall be—
 Except the existing.

Now, as the only Existence was The One, it follows that The One and Thought are identical; a conclusion which by no means contradicts the opinion before noticed of the identity of human thought and sensation, both of these being merely transitory modes of Existence.

Respecting the second or physical doctrine of Parmenides, we may briefly say that, believing it necessary to give a science of Appearances, he sketched out a programme according to the principles reigning in his day. He denied motion as a reality, but admitted that according to appearance there was motion.

Parmenides represents the logical and more rigorous side of the doctrine of Xenophanes, from which the physical element is almost banished by being condemned to the

region of uncertain Sense. Although he preserved himself from scepticism, as we saw, nevertheless the tendency of his doctrine was to forward scepticism. In his exposition of the uncertainty of knowledge, he retained a saving clause—that, namely, of the certainty of Reason. It only remained for successors to apply the same scepticism to the ideas of Reason, and Pyrrhonism was complete.

§ IV. ZENO OF ELEA.

Zeno, by Plato called the Palamedes of Elea, must not be confounded with Zeno the Stoic. He was on all accounts one of the most distinguished of the ancient philosophers; as great in his actions as in his works; and remarkable in each for a strong, impetuous, disinterested spirit. Born at Elea about the 70th Olympiad (B.C. 500), he became the pupil of Parmenides, and, as some say, his adopted son.

The first period of his life was spent in the calm solitudes of study. From his beloved friend and master he had learned to appreciate the superiority of intellectual pleasures—the only pleasures that do not satiate. From him also he had learned to despise the splendours of rank and fortune, without becoming misanthropical or egoistical. He worked for the benefit of his fellow-men, but declined the recompense of rank, or worldly honours, with which they would have repaid their labours. His recompense was the voice of his own heart beating calmly in conscious integrity. The absence of ambition in so intrepid and exalted a mind, might well have been the wonderment of antiquity; for it was no sceptical indifference, no disdain for the opinions of his fellow-men, which made him shun office. He was a delicate no less than an impetuous man, extremely sensitive to praise and blame; as may be seen in his admirable reply to one who asked him why he was so hurt by blame: 'If the blame of my fellow-citizens did not cause me pain, their approbation would not cause me pleasure.' In timid minds, shrinking from the coarse ridicule of fools and knaves, this sensi-

tiveness is fatal; but in those brave spirits who fear nothing but their own consciences, and who accept no approbation but such as their consciences can ratify, this sensitiveness lies at the root of all heroism and noble endeavour. One of those men was Zeno. His life was a battle, but the battle was for Truth; it ended tragically, but it was not fought in vain.

Perhaps of all his moral qualities his patriotism has been the most renowned. He lived at the period of the awakening of liberty, when Greece was everywhere enfranchising herself, everywhere loosening the Persian yoke, and endeavouring to found national institutions on freedom. In the general effervescence and enthusiasm Zeno was not cold. His political activity we have no means of judging; but we learn that it was great and beneficial. Elea was but a small colony; but Zeno preferred it to the magnificence of Athens, the luxurious, restless, quibbling, frivolous, passionate, and unprincipled citizens of which he contrasted with the provincial modesty and honesty of Elea. He did, however, occasionally visit Athens, and there promulgated the doctrines of his master, as we see by the opening of Plato's dialogue, the *Parmenides*. There he taught Pericles.

On the occasion of his last return to Elea, he found it had fallen into the hands of the tyrant Nearchus (or Diomedon, or Demylos: the name is differently given by ancient writers). He conspired against him, failed in his project, and was captured. It was then, as Cicero observes, that he proved the excellence of his master's doctrines, and proved that a courageous soul fears only that which is base, and that fear and pain are for women and children, or men who have feminize hearts. When Nearchus interrogated him as to his accomplices, he threw the tyrant into an agony of doubt and fear by naming all the courtiers: a masterstroke of audacity, and in those days not discreditable. Having thus terrified his accuser, he turned to the spectators, and exclaimed, 'If you can consent to be slaves from fear of what you see me now suffer, I can only wonder at your

cowardice.* The people were so roused that they fell upon Nearchus and slew him.

There are considerable variations in the accounts of this story by ancient writers, but all agree in the main narrative given above. Some say that Zeno was pounded to death in a huge mortar. We have no trustworthy account of his death.

As a philosopher, Zeno's merits are peculiar. He was the inventor of that logic so celebrated as Dialectics. This, which, in the hands of Socrates and Plato, became a powerful weapon of offence, is, by the universal consent of antiquity, ascribed to Zeno. It may be defined as 'A refutation of error by the *reductio ad absurdum* as a means of establishing the truth.' The truth to be established in Zeno's case was the system of Parmenides; we must not, therefore, seek in his arguments for any novelty beyond the mere exercise of dialectical subtlety. He brought nothing new to the system; but he invented a great method of polemical exposition. The system had been conceived by Xenophanes; precision had been given to it by Parmenides; and there only remained for Zeno the task of fighting for and defending it; which task he admirably fulfilled. 'The destiny of Zeno was altogether polemical. Hence, in the external world, the impetuous existence and tragical end of the patriot; and, in the internal world, the world of thought, the laborious character of Dialectician.†

It was this fighter's destiny which caused him to perfect the art of offence and defence. He very naturally wrote in prose; of which he set the first example: for, as the wild and turbulent enthusiasm of Xenophanes would instinctively express itself in poetry, so would the argumentative subtlety of Zeno naturally express itself in prose. The great rhapsodist wandered from city to city, intent upon earnest and startling

* It is a pity to destroy the story of his having concluded this harangue by biting his tongue off and spitting it in the tyrant's face; but that is one of those epigrams in action which ill withstand criticism.

† COUSIN, *Fragments Philosophiques*, art. *Zénon d'Elée*.

enunciation of the mighty thoughts stirring confusedly within him; the great logician was more intent upon a convincing exposition of the futility of the arguments alleged against his system, than upon any propaganda of the system itself; for he held that the truth must be accepted when once error is exposed. 'Antiquity,' says M. Cousin, 'attests that he wrote not poems, like Xenophanes and Parmenides, but treatises, and treatises of an eminently prosaic character: that is to say, refutations.'

The reason of this may be easily guessed. Coming as a young man to Athens, to preach the doctrine of Parmenides, he must have been startled at the opposition which that doctrine met with from the subtle, quick-witted, and empirical Athenians, who had already erected the Ionian philosophy into the reigning doctrine. Zeno, no doubt, was at first stunned by the noisy objections which on all sides surrounded him; but, being also one of the keenest of wits, and one of the readiest, he would soon have recovered his balance, and in turn assailed his assailers. Instead of teaching dogmatically, he began to teach dialectically. Instead of resting in the domain of pure science, and expounding the ideas of Reason, he descended upon the ground occupied by his adversaries,—the ground of daily experience and sense-knowledge,—and turning their ridicule upon themselves, forced them to admit that it was more easy to conceive The Many as a produce of The One, than to conceive The One on the assumption of the existing Many.

'The polemical method entirely disconcerted the partisans of the Ionian philosophy,' says M. Cousin, 'and excited a lively curiosity and interest for the doctrines of the Italian (Pythagorean) school; and thus was sown in the capital of Greek civilisation the fruitful germ of a higher development of philosophy.'

Plato has succinctly characterised the difference between Parmenides and Zeno by saying, that the master established the existence of The One, and the disciple proved the non-existence of The Many.

When he argued that there was but One thing really existing, all the others being only modifications or appearances of that One, he did not deny that there were *many appearances*, he only denied that these appearances were real existences. So, in like manner, he denied motion, but not the appearance of motion. Diogenes the Cynic, who to refute his argument against motion rose and walked, entirely mistook the argument; his walking was no more a refutation of Zeno, than Dr. Johnson's kicking a stone was a refutation of Berkeley's denial of matter. Zeno would have answered: Very true: you walk: according to Opinion (*τὸ δοξαστόν*), you are in motion; but according to Reason you are at rest. What you call motion is but the name given to a series of similar conditions, each of which, separately considered, is rest. Thus, every object filling space equal to its bulk is necessarily at rest in that space; motion from one spot to another is but a name given to the *sum-total* of all these *intermediate spaces* in which *the object at each moment is at rest*. Take the illustration of the circle: a circle is composed of a number of individual points, or straight lines; not one of these lines can individually be called a circle; but all these lines, considered as a totality, have one general name given them, viz. a circle. In the same way, in each individual point of space the object is at rest; the sum-total of a number of these states of rest is called motion.

The original fallacy is in the supposition that Motion is a thing superadded, whereas, as Zeno clearly saw, it is only a *condition*. In a falling stone there is not the 'stone' and a thing called 'motion;' otherwise there would be also another thing called 'rest.' But both motion and rest are names given to express conditions of the stone. Even rest is a positive exertion of force. Rest is force, resisting an equivalent and opposing force; Motion is force triumphant. It follows that matter is always in motion; which amounts to the same as Zeno's saying, there is no such thing as Motion.

The other arguments of Zeno against the possibility of

Motion (and he maintained four, the third of which we have above explained), are given by Aristotle; but they seem more like the ingenious puzzles of dialectical subtlety than the real arguments of an earnest man. It has, therefore, been asserted, that they were only brought forward to ridicule the unskillfulness of his adversaries. We must not, however, be hasty in rescuing Zeno from his own logical net, into which he may have fallen as easily as others. Greater men than he have been the dupes of their own verbal distinctions.

Here are his two first arguments:—

1. Motion is impossible, because before that which is in motion can reach the end, it must reach the middle point; but this middle point then becomes the end, and the same objection applies to it,—since to reach it the object in motion must traverse a middle point; and so on *ad infinitum*, seeing that matter is infinitely divisible. Thus, if a stone be cast four paces, before it can reach the fourth it must reach the second; the second then becomes the end, and the first pace the middle: but before the object can reach the first pace it must reach the half of the first pace, and before the half it must reach the half of that half; and so on *ad infinitum*.

2. This is his famous Achilles puzzle. We give both the statement and refutation as we find it in Mill's *Logic* (ii. 453).

The argument is, let Achilles run ten times as fast as a tortoise, yet, if the tortoise has the start, Achilles will never overtake him: for, suppose them to be at first separated by an interval of a thousand feet; when Achilles has run these thousand feet the tortoise will have run a hundred, and when Achilles has run those hundred the tortoise will have got on ten, and so on for ever: therefore Achilles may run for ever without overtaking the tortoise.

Now the 'for ever' in the conclusion means, for any length of time that can be supposed; but in the premisses 'for ever' does not mean any *length* of time—it means any *number of subdivisions of time*. It means that we may divide

a thousand feet by ten, and that quotient again by ten, and so on as often as we please; that there never need be an end to the subdivisions of the distance, nor, consequently, to those of the time in which it is performed. But an unlimited number of subdivisions may be made of that which is itself limited. The argument proves no other infinity of duration than may be embraced within five minutes. As long as the five minutes are not expired, what remains of them may be divided by ten, and again by ten, as often as we like, which is perfectly compatible with their being only five minutes altogether. It proves, in short, that to pass through this finite space requires a *time which is infinitely divisible*, but not an *infinite time*; the confounding of which distinction Hobbes had already seen to be the gist of the fallacy.

Although the credit of seeing the ground of the fallacy is given by Mill to Hobbes, we must also observe that Aristotle had clearly seen it in the same light. His answer to Zeno, which Bayle thinks 'pitiable,' was, that a foot of space being only *potentially infinite*, but *actually finite*, it could be easily traversed in a *finite time*.

We cannot here follow Zeno in his various arguments against the existence of a multitude of things. His position may be briefly summed up thus: There is but one Being existing necessarily indivisible and infinite. To suppose that The One is divisible, is to suppose it finite. If divisible, it must be infinitely divisible. But, suppose two things to exist, then there must necessarily be an interval between those two: something separating and limiting them. What is that something? It is some *other* thing. But then, if not the *same* thing, *it also* must be separated and limited; and so on *ad infinitum*. Thus only One thing can exist as the *substratum* for all manifold appearances.

These arguments, as Mr. Grote observes,* are memorable because they are the earliest known manifestations of Grecian dialectic, and are probably equal in acuteness and ingenuity

* GROTE: *Plato* i. 102.

to anything which it ever produced. Their bearing is not always acutely conceived. Most of them are *argumenta ad hominem*: consequences contradictory and inadmissible, but shown to follow legitimately from a given hypothesis, and therefore serving to disprove the hypothesis itself. The result of Zeno's reasoning, implied rather than expressed, is that neither of the contradictory hypotheses is capable of supplying a real basis for the phenomenal world. His purport is mistaken when it is supposed that he wished to delude his hearers by proving both sides of a contradictory proposition. It was to disprove the premises. It was the serious introduction into philosophy of that sceptical negative element which the dogmatists had disregarded. And in this respect it marks the close of an epoch, and the opening movement of a new one.

Zeno closes the second great line of independent inquiry, opened by Anaximander, and continued by Pythagoras, Xenophanes, and Parmenides, which we may characterise as the Mathematical. Its opposition to the Physical or Empirical inquiry was radical and constant. But, up to the coming of Zeno, these two systems had been developed almost in parallel lines, so little influence did they exert upon each other. The two systems clashed together on the arrival of Zeno at Athens. The result of the conflict was the creation of a new method,—Dialectics. This method created the Sophists and the Sceptics. It also greatly influenced all succeeding schools, and may be said to have constituted one great peculiarity of Socrates and Plato, as will be shown.

We must however previously trace the intermediate steps which philosophy took before the crisis of Sophistry which preceded the era of Socrates.

SECOND EPOCH.

The failure of Cosmological speculations directs the efforts of Philosophy to the psychological problems of the origin and limits of Knowledge.

CHAPTER I.

§ I. HERACLITUS.

HORACE WALPOLE'S epigram, 'Life is a comedy to those who think, a tragedy to those who feel,' may be applied to Democritus and Heraclitus, celebrated throughout antiquity as the laughing and the weeping philosophers:

One pitied, one condemn'd the woful times:
One laugh'd at follies, and one wept o'er crimes.

Modern criticism has indeed pronounced both these characteristics to be fabulous; but fables themselves are often only exaggerations of truth, and there must have been something in the lives of each of these philosophers which formed the nucleus round which the fables grew. Of Heraclitus it has been well said, 'The vulgar notion of him as the crying philosopher must not be wholly discarded, as if it meant nothing, or had no connection with the history of his speculations. The thoughts which came forth in his system are like fragments torn from his own personal being, and not torn from it without such an effort and violence as must needs have drawn a sigh from the sufferer. If Anaximenes discovered that he had within him a power and principle which ruled over all the acts and functions of his bodily

frame, Heraclitus found that there was a life within him which he could not call his own, and yet it was, in the very highest sense, *himself*, so that without it he would have been a poor, helpless, isolated creature;—a universal life, which connected him with his fellow-men,—with the absolute source and original fountain of life.*

Heraclitus was the son of Blyson, and was born at Ephesus, about the 69th Olympiad (B.C. 503). Of a haughty, melancholy temper, he refused the supreme magistracy which his fellow-citizens offered him; on account of their dissolute morals, according to Diogenes Laertius; but, as he declined the offer in favour of his brother, his rejection was probably grounded on some other reason. Is not his rejection of magistracy in perfect keeping with what else we know of him? For instance: playing with some children near the temple of Diana, he answered those who expressed surprise at seeing him thus occupied, 'Is it not better to play with children, than to share with you the administration of affairs?' The contempt which pierces through this reply, and which subsequently grew into confirmed misanthropy, may have been the result of morbid meditation, rather than of virtuous scorn. Was it because the citizens were corrupt that he refused to exert himself to make them virtuous? Was it because the citizens were corrupt, that he retired to the mountains, and there lived on herbs and roots, like an ascetic? If Ephesus was dissolute, was there not the rest of Greece for him to make a home of? He fled to the mountains, there, in secret, to prey on his own heart. He was a misanthrope, and misanthropy issues more from the morbid consciousness of self, than from the sorrowful opinion formed of others.

In a contemptuous letter he thus declined the courteous invitation of Darius to spend some time at his court.

* MAURICE, *Moral and Metaphysical Philosophy*.

'Heraclitus of Ephesus to the King Darius, son of Hystaspes, health!'

'All men depart from the paths of truth and justice. They have no attachment of any kind but avarice; they only aspire to a vain-glory with the obstinacy of folly. As for me, I know not malice; I am the enemy of no one. I utterly despise the vanity of courts, and never will place my foot on Persian ground. Content with little, I live as I please.'

The Philosophy of Heraclitus was delivered in such enigmatical terms, that he was called 'the Obscure.' A few fragments have been handed down to us.* From these it would be vain to hope that a consistent system could be evolved; but from them, and from other sources, we may gather the general tendency of his doctrines.

The tradition which assigns him Xenophanes as a teacher, is borne out by the evident relation of their systems. Heraclitus is somewhat more Ionian than Xenophanes: that is to say, in him the physical explanation of the universe is more prominent. At the same time, Heraclitus is neither frankly Ionian nor Italian; he wavers between the two. The pupil of Xenophanes would naturally regard human knowledge as a mist of error, through which the sunlight only gleamed at intervals. But the inheritor of the Ionian doctrines would not adopt the conclusion of the Mathematical school, namely, that the cause of this uncertainty of knowledge is the uncertainty of sensuous impressions; and that consequently Reason is the only fountain of truth. He maintained that the senses are the sources of all true knowledge, for they drink in the universal intelligence. The senses deceive only when they belong to barbarian souls: in other words, the ill-educated sense gives false impressions, the rightly-educated sense gives truth. Whatever is common is true; whatever is remote from the common, i. e. the exceptional, is false. The

* SCHLEIERMACHER has collected, and endeavoured to interpret them, in WOLF and BUTTMANN'S *Museum der Alterthumswissenschaften*, vol. i. part iii.

True is the Unhidden.* Those whose senses are open to receive the Unhidden, the Universal, attain truth.

As if to mark the distinction between himself and Xenophanes more forcibly, he says: 'Inhaling through the breath the Universal Ether, which is Divine Reason, we become conscious. In sleep we are unconscious, but on waking we again become intelligent; for in sleep, when the organs of sense are closed, the mind within is shut out from all sympathy with the surrounding ether, the universal Reason; and the only connecting medium is the breath, as it were a root, and by this separation the mind loses the power of recollection it before possessed. Nevertheless on awakening the mind repairs its memory through the senses, as it were through inlets; and thus, coming into contact with the surrounding ether, it resumes its intelligence. As fuel when brought near the fire is altered and becomes fiery, but on being removed again becomes quickly extinguished; so too the portion of the all-embracing which sojourns in our body becomes more irrational when separated from it; but on the restoration of this connection, through its many pores or inlets, it again becomes similar to the whole.'

Can anything be more opposed to the Eleatic doctrine? That system rests on the certitude of pure Reason; this declares that Reason left to itself, i. e. the mind when it is not nourished by the senses, can have no true knowledge. The one system is exclusively rational, the other exclusively sensuous; but both are pantheistical, for in both it is the universal Intelligence which becomes conscious in man,—a conception pushed to its ultimate limits by Hegel. Accordingly Hegel declares that there is not a single point in the Logic of Heraclitus which he, Hegel, has not developed in his own Logic.†

The reader will remark how in Heraclitus, as in Parmenides, there is opened the great question which for so

* 'Ἀληθὲς τὸ μὴ λήθον. This kind of play upon words is very characteristic of metaphysical thinkers in all ages.

† HEGEL: *Gesch. der Phil.* i. 301.

long agitated the schools, and which still agitates them,—the question respecting the origin of our ideas. He will also remark how the two great parties, into which thinkers have divided themselves on the question, are typified in these two early thinkers. In Parmenides the idealist school, with its disregard of sense; in Heraclitus the sensational school, with its disregard of everything not derived from sensation.

With Xenophanes, Heraclitus agreed in denouncing the perpetual delusion which reigned in the mind of man; but he placed the cause of that delusion in the imperfection of human Reason, not, as Xenophanes had done, in the imperfection of Sense. He thought that man had too little of the Divine Ether (soul) within him. Xenophanes thought that the senses clouded the intellectual vision. The one counselled man to let the Universal mirror itself in his soul through the senses; the other counselled him to shut himself up within himself, to disregard the senses, and to commune only with ideas.

It seems strange that so palpable a contradiction between two doctrines should ever have been overlooked. Heraclitus is often said to have regarded the world of Sense as a perpetual delusion: and this is said in the very latest and not the least critical of Histories. Whence this opinion? Simply from the scepticism of both Heraclitus and Xenophanes with respect to Phenomena (appearances). It is true they both denied the certainty of human knowledge, but they denied this on different grounds. 'Man has no certain knowledge,' said Heraclitus, 'but God has; and vain man learns from God just as the boy from the man.' In his conception, human intelligence was but a portion of the Universal Intelligence; but a part can never be otherwise than imperfect. Hence it is that the opinion of all mankind upon any subject (common sense) must be a nearer approximation to the truth than the opinion of any individual; because it is an accumulation of parts, making a nearer approach to the whole.

Men erred by following their individual judgement as if it

were the absolute judgement, as if reason belonged to each individually. But the real way of reaching truth was to get free from this individual bias, and to follow the universal reason. Each man must familiarise his mind with that common process which directs the world; in sleep he leaves the individual world and retires into the universal reason. No man really understands, no man is possessed of universal reason, unless he has discovered the general scheme of things, namely its perpetual *alternation*, its unity of contraries. Whoever had risen to this height had mastered the universal reason.

While therefore he maintained the uncertainty of all knowledge, he also maintained its certainty. Its origin was Sense; being sensuous and individual, it was imperfect, *because* individual; but it was true as far as it went. The ass, he scornfully said, prefers thistles to gold. To the ass gold is *not* so valuable as thistle. The ass is at once right and wrong. Man is equally right and wrong in all positive affirmations; for nothing truly *is*, about which a positive affirmation can be made. 'All is,' he said, 'and all is not; for though in truth it does come into being, yet it forthwith ceases to be.'

We are here led to his celebrated doctrine of all things as a 'perpetual flux and reflux;' which Hegel declares to be an anticipation of his own celebrated dogma, *Seyn und Nichtseyen ist dasselbe*: 'Being and Non-being is the same.*' Heraclitus conceived the principle—*ἀρχή*—of all things to be Fire. To him Fire was the type of spontaneous force and activity; not flame, which was only an intensity of Fire, but a warm, dry vapour—an Ether; this was the beginning. He says: 'The world was neither by God† nor man; and it was, and is, and

* Much of the ridicule which this logical canon has excited, especially in England, has been prompted by the blindest misunderstanding. The laughers, misled by verbal ambiguity, have understood Hegel to say that Existence and Non-Existence was one and the same, as if by *Nichtseyen* he meant Nothing in the common acceptance of that word. By Nothing he meant no thing—no discreet determined object—existence pure and simple, free from all conditions.

† This is the translation given in RITTER: it is not however exact; *οὔτε τις θεῶν*

ever shall be, an ever-living fire in due measure self-enkindled and in due measure self-extinguished.' That this is but a modification of the Ionian system, the reader will at once discern. The fire, which here stands as the semi-symbol of Life and Intelligence, because of its spontaneous activity, is but a modification of the Water of Thales and the Air of Anaximenes; moreover, it is only semi-symbolical. Those who accept it as a pure symbol overlook the other parts of the system. The system which proclaims the senses as the source of all knowledge necessarily attaches itself to a material element as the primary one. At the same time this very system is in one respect a deviation from the Ionian; in the distinction between sense-knowledge and reflective knowledge. Hence we placed Diogenes of Apollonia as the last of the pure Ionians; although chronologically he came some time after Heraclitus, and his doctrine is in many respects the same as that of Heraclitus.

This Fire which is for ever kindling into flame, and passing into smoke and ashes; this restless, changing flux of things which never *are*, but are ever *becoming*; this Heraclitus proclaimed to be God, or the One.

Take his beautiful illustration of a river: 'No one has ever been twice on the same stream; for different waters are constantly flowing down; it dissipates its waters and gathers them again—it approaches and it recedes—it overflows and falls.' This is evidently but a statement of the flux and reflux, as in his aphorism that 'all is in motion; there is no rest or quietude.' Let us also add here what Ritter says:—

'The notion of life implies that of alteration, which by the ancients was generally conceived as motion. The Universal Life is therefore an eternal motion, and therefore tends, as every motion must, towards some end, even though this end, in the course of the evolution of life, present itself to us as a mere transition to some ulterior end. Heraclitus on this ground supposed a certain longing to be inherent in Fire, to

is the original, i. e. 'neither one of the Gods,' meaning of course one of the polytheistic Deities.

gratify which it constantly transformed itself into some determinate form of being, without, however, any wish to maintain it, but in the mere desire of transmuting itself from one form into another. Therefore, to make worlds is Jove's pastime.'

He explained phenomena as the concurrence of opposite tendencies and efforts in the motion of the ever-living Fire, out of which results the most beautiful harmony. All is composed of contraries, so that the good is also evil, the living is dead, etc. The harmony of the world is one of conflicting impulses, like that of the lyre and the bow. The strife between opposite tendencies is the parent of all things: πόλεμος πάντων μὲν πατήρ ἐστὶ πάντων δὲ βασιλεὺς, καὶ τοὺς μὲν θεοὺς ἔδειξε τοὺς δὲ ἀνθρώπους τοὺς μὲν δούλους ἐποίησε τοὺς δὲ ἐλευθέρους. Nor is this simple metaphor: the strife here spoken of is the splitting in two of that which is in essence one; the contradiction which necessarily lies between the particular and the general, the result and the force, Being and Non-Being. All life is change, and change is strife.

Heraclitus was the first to proclaim the absolute vitality of Nature, the endless change of matter, the mutability and perishability of all individual things, in contrast with the eternal Being, the supreme Harmony which rules over all.

The view here taken of his doctrines will at once explain the position in which we have placed them. Heraclitus stands with one foot on the Ionian path, and with the other on the Italian; but his attempt is not to unite these two; his office is negative; he has to criticise both.

§ II. ANAXAGORAS.

Anaxagoras is generally said to have been born at Clazomenæ in Lydia, not far from Colophon. Inheriting from his family a splendid patrimony, he seemed born to figure in the State; but, like Parmenides, he disregarded all such external greatness, and placed his ambition elsewhere. Early in life, so early as his twentieth year, the passion for

philosophy engrossed him. Like all young ambitious men, he looked with contempt upon the intellect exhibited in his native city. His soul panted for the capital. The busy activity and the growing importance of Athens solicited him. He yearned towards it as the ambitious youth in a provincial town yearns for London; as all energy longs for a fitting theatre on which to play its part.

He came to Athens. It was a great and stirring epoch. The countless hosts of Persia had been scattered by a handful of resolute men. The political importance of Greece, and of Athens the Queen of Greece, was growing to a climax. The Age of Pericles, one of the most glorious in the annals of mankind, was dawning. The Poems of Homer formed the subject of literary conversation. The early triumphs of Æschylus had created a Drama, such as still remains the wonder and delight of scholars and critics. The young Sophocles, that perfect flower of antique art, was then in his bloom, meditating on that Drama which he was hereafter to bring to perfection in the *Antigone* and the *Edipus Rex*. The Ionian philosophy had found a home at Athens; and the young Anaxagoras shared his time with Homer and Anaximenes.*

Philosophy soon obtained the supreme place in his affections. He yielded himself to the fascination, and declared that the aim and purpose of his life was to contemplate the heavens. All care for his affairs was given up. His estates ran to waste, whilst he was solving problems. But the day he found himself a beggar, he exclaimed, 'To Philosophy I owe my worldly ruin, and my soul's prosperity.' He commenced teaching, and among illustrious pupils counted Pericles, Euripides, and Socrates.

* By this we no more intimate that he was a disciple of Anaximenes (as some historians assert) than that he was a friend of Homer. But in some such ambiguous phrase as that in the text, must the error of calling him the disciple of Anaximenes have arisen. BRUCKER's own chronology is strangely at variance with his statement: for he places the birth of Anaximenes, 56th Olympiad; that of Anaxagoras, 70th Olympiad: thus making the master fifty-six years old at the birth of the pupil; and the pupil had reached the middle of his life before seeking the supposed master, who must then have been a century old.

He was not long without paying the penalty of success. The envy and uncharitableness of some, joined the bigotry of others in an accusation of impiety against him. He was tried, and condemned to death; but owed the mitigation of his sentence into banishment, to the eloquence of his friend and pupil, Pericles. Some have supposed that the cause of his persecution was this very friendship of Pericles; and that the statesman was struck at through the unpopular philosopher. The supposition is gratuitous, and belongs rather to the ingenuity of modern scholarship, than to the sober facts of history. In the persecution of Anaxagoras there is nothing but what was very natural; it was the persecution which occurred afterwards in the case of Socrates, and has subsequently occurred a thousand times in the history of mankind, as the simple effect of outraged convictions. Anaxagoras attacked the religion of his time: he was tried and condemned for his temerity.

After his banishment he resided in Lampsacus, and there preserved tranquillity of mind until his death. 'It is not I who have lost the Athenians; it is the Athenians who have lost me,' was his proud reflection. He continued his studies, and was highly respected by the citizens, who, wishing to pay some mark of esteem to his memory, asked him on his deathbed in what manner they could do so. He begged that the day of his death might be annually kept as a holiday in all the schools of Lampsacus. For centuries this request was fulfilled. He died in his seventy-third year. A tomb was erected to him in the city, with this inscription:—

This tomb great Anaxagoras confines,
Whose mind explored the heavenly paths of Truth.

His philosophy contains so many contradictory principles, or perhaps it would be more correct to say so many contradictory principles are attributed to him, that it would be vain to attempt a systematic view of them. We may, as usual, confine ourselves to leading doctrines.

On the great subject of the origin and certainty of our knowledge, he differed from Xenophanes and Heraclitus.

He thought, with the former, that all sense-knowledge is delusive; and, with the latter, that all knowledge comes through the senses. Here is a double scepticism brought into play. It has usually been held that these two opinions contradict each other; that he could not have maintained both. Yet both opinions are tenable. His reason for denying certainty to the senses was the incapacity of distinguishing all the real objective elements of which things are composed. Thus the eye discerns a complex mass which we call a flower; but discerns nothing of that *of which* the flower is composed. In other words, the senses perceive *phenomena*, but do not and cannot observe *noumena*,*—an anticipation of the greatest discovery of psychology, though seen dimly and confusedly by Anaxagoras. Perhaps the most convincing proof of his having so conceived knowledge is in the passage quoted by Aristotle: 'Things are to each according as they seem to him' (*ὅτι τοιαῦτα αὐτοῖς τὰ ὄντα, οἷα ἂν ὑπολάβωσι*). What is this but the assertion of all knowledge being confined to phenomena? It is further strengthened by the passage in Sextus Empiricus, that 'phenomena are the criteria of our knowledge of things beyond sense,' i. e. things inevident are evident in phenomena (*τῆς τῶν ἀδήλων καταλήψεως, τὰ φαινόμενα*).

It must not, however, be concluded, from the above, that Anaxagoras regarded Sense as the sole origin of Knowledge. He held that the Reason (*λόγος*) was the regulating faculty of the mind, as Intelligence (*νοῦς*) was of the universe. The senses are accurate in their reports; but their reports are not accurate copies of Things. They reflect objects; but they reflect them as these objects appear to Sense. Reason has to control these impressions, to verify these reports.

* *Noumenon* is the antithesis to *Phenomenon*, which means *Appearance*; *Noumenon* means the *Substratum*, or, to use the scholastic word, the *Substance*. Thus, as matter is recognised by us only in its manifestations (*phenomena*), we may logically distinguish those manifestations from the thing manifested (*noumenon*). And the former will be the *materia circa quam*; the latter, the *materia in quâ*. *Noumenon* is therefore equivalent to the *Essence*; *Phenomenon* to the *Manifestations*.

Let us now apply this doctrine to the explanation of some of those apparently contradictory statements which have puzzled critics. For instance, Anaxagoras says that snow is not white but black, because the water of which it is composed is black. Now, in this he could not have meant that snow did not appear to our senses white; his express doctrine of sense-knowledge forbids such an interpretation. But Reason told him that the Senses gave inaccurate reports; and, in this instance, Reason showed him how their report was contradictory, since the water was black, yet the snow white. Here, then, is the whole theory of knowledge exemplified: Sense asserting that snow is white; Reflection asserting that snow made from black water could not be white, only *seem* white. He had another illustration:—Take two liquids, white and black, and pour the one into the other drop by drop; the eye will be unable to discern the actual change as it is gradually going on; it will only discern it at certain marked intervals.

Thus did he separate himself at once from Xenophanes and Heraclitus. From the former, because admitting Sense to be the only criterion of things, the only source of knowledge, he could not regard the *λόγος* as the unfailing source of truth, but merely as the reflective power, whereby the reports of sense were controlled. From the latter, because reflection convinced him that the reports of the senses were subjectively true, but objectively false.* Both Xenophanes and Heraclitus had principles of absolute certitude; the one proclaimed Reason, the other Sense, to be that principle.

Anaxagoras opposed the one by showing that the Reason was dependent on the Senses for materials; and he opposed the other by showing that the materials were fallacious.

* Subjective and objective are now almost naturalised terms: it may not be superfluous, nevertheless, to explain them. The *subject* means 'the Mind of the Thinker' (*Ego*), the *object* means the 'Thing thought of' (*Non-Ego*). The above passage—'the reports of the senses being subjectively true'—means that the senses truly inform us of their *impressions*; but these impressions are not at all like the actual *objects* (as may be shown by the *broken appearance* of a stick, half of which is dipped in water), and therefore the reports are objectively false.

Having thus, not without considerable difficulty, brought his various opinions on human knowledge under one system, let us endeavour to do the same for his cosmology. The principle of his system is thus announced:—'Wrongly do the Greeks suppose that aught begins or ceases to be; for nothing comes into being or is destroyed; but all is an aggregation or secretion of pre-existent things: so that all becoming might more correctly be called becoming-mixed, and all corruption becoming-separate.' He denied a Creation, admitting only an Arrangement: instead of one first element, there was an infinite number of elements. These elements were the celebrated *homœomeriæ*:—

Ex aurique putat micis consistere posse
Aurum, et de terris terram conrescere parvis,
Ignibus ex ignem, humorem ex humoribus esse;
Cætera consimili fingit ratione putatque.*

This singular opinion, which maintains that flesh is made of molecules of elementary flesh, and bones of elementary bones, and so forth, is intelligible on his theory of knowledge. Sense discerns elementary differences in matter, and Reflection confirms the truth of this observation. Nothing can proceed from Nothing; the universe can be only an Arrangement of existing things; but when in this Arrangement certain things are discovered to be radically distinguished from each other, gold from blood for example,—either the distinction observed by the Senses is altogether false, or else the things distinguished must be elements. But the first horn of the dilemma is avoided by the sensuous nature of all knowledge; if the Senses deceive us in this respect, and Reason does not indicate the deception, then is all knowledge a delusion; therefore, unless we adopt scepticism, we must abide by the testimony of the Senses as to the essential distinction of things. But,

* LUCRETIIUS, i. 839.

That gold from parts of the same nature rose,
That earths do earth, fires fire, airs air compose,
And so in all things else alike to those.'—CREECH.

There seems to be good reason to believe that not Anaxagoras, but Aristotle, was the originator of the word *homœomeriæ*. See RITTER, i. 286.

having granted the distinction, we must grant that the things distinguished are elements; if not, whence the distinction? Nothing can come of Nothing; blood can only become blood, gold can only become gold, mix them how you will; if blood can become bone, then does bone become something out of nothing, for it was not bone before, and it is bone now. But, as blood can only be blood, and bone only be bone, whenever they are mingled it is a mingling of two elements, *homœomeriæ*.

In the beginning therefore there was the Infinite composed of *homœomeriæ*, or elementary seeds of infinite variety. So far from The All being The One, as Parmenides and Thales equally taught, Anaxagoras proclaimed The All to be The Many. But the mass of elements were as yet unmixed. What was to mix them? What power caused them to become arranged in one harmonious all-embracing system?

This power Anaxagoras declared to be Intelligence (*νοῦς*), the moving force of the Universe. He had, on the one hand, rejected Fate, as an empty name; on the other, he rejected Chance, as being no more than the Cause unperceived by human reasoning (*τὴν τύχην, ἄδηλον αἰτίαν ἀνθρωπίνῳ λογισμῷ*). This is another remarkable glimpse of what modern philosophy was to establish. Having thus disclaimed these two powers, so potent in early speculation, Fate and Chance, he had no other course left than to proclaim Intelligence the Arranging Power.*

This seems to us, on the whole, the most remarkable speculation of all the pre-Socratic epoch; and indeed is so very near the philosophic precision of modern times, that it is with difficulty we preserve its original simplicity. We will cite a portion of the fragment preserved by Simplicius, wherein Intelligence is spoken of:—‘Intelligence (*νοῦς*) is infinite, and autocratic; it is mixed up with nothing, but exists alone in and for itself. Were it otherwise, were it mixed up with anything, it would participate in the nature

* We have his own words reported by DIOGENES, who says that his work opened thus: ‘Formerly all things were a confused mass; afterwards, Intelligence coming, arranged them into worlds.’

of all things; for in all there is a part of all; and so that which was mixed with intelligence would prevent it from exercising power over all things.*—In this passage we may fancy we read an anticipation of the modern conception of the Deity acting through invariable laws, but in no way mixed up with the matter acted on.

Nevertheless a deeper acquaintance with ancient Speculation discloses that Anaxagoras had no thought of making *Nous* the representative of the supreme Deity, or even as a God among Gods. It was only the abstract form of the vital principle animating animals and plants. ‘It is one substance or form of matter among the rest’ says Mr. Grote ‘but thinner than all of them (thinner even than fire or air) and distinguished by the peculiar characteristic of being unmixed. It has moving power and knowledge, like the Air of Diogenes the Apolloniate; it initiates movement; and it knows about all things which will pass into or out of combination.’ It was not, like the Demiurgus of Plato, an extra mundane Architect nor, like the Nature of Aristotle, an intra mundane immanent instinct, but simply one among the numerous agents, material like the rest, and only differing from them by being pure.† The *homœomeriæ* are coeternal with if not anterior to the *Nous*, having laws of their own which they follow without waiting for the dictation of the *Nous*.

Aristotle objects to Anaxagoras, that ‘he uses Intelligence as a machine,‡ in respect to the formation of the world; so that, when he is embarrassed how to explain the cause of this or that, he introduces Intelligence; but in all other things

* This passage perfectly accords with what ARISTOTLE says, *De Animâ*, i. 2, and *Metaph.* i. 7.

† See on this point HEGEL: *Gesch. d. Phil.* i. 356. ‘Hierbei müssen wir uns nicht den subjectiven Gedanken vorstellen; wir denken beim Denken sogleich an unser Denken, wie es im Bewusstsein ist. Hier ist dagegen der ganz objective Gedanke gemeint. . . . Der *Noûs* ist also nicht ein denkendes Wesen draussen, das die Welt eingerichtet . . . ein denkendes sogenanntes Wesen ist kein Gedanke mehr, ist ein Subject.’

‡ This is an allusion to the theatrical artifice of bringing down a God from Olympus, to solve the difficulty of the *dénouement*,—the *Deus ex machinâ* of Horace. We make this remark to caution the reader against supposing that the objection is to a mechanical intelligence.

it is any cause but Intelligence which produces things.' Anaxagoras assigned to Intelligence the great Arrangement of the *homœomeriæ*; but of course he supposed that subordinate arrangements were carried on by themselves. The Christian thinker some centuries back believed that the Deity created and ordained all things; nevertheless when he burnt his finger the cause of the burn he attributed to fire, and not to God; but when the thunder muttered in the sky he attributed that to no cause but God. Is not this similar to the conception formed by Anaxagoras? What he *can* explain, he does explain by natural causes; whatever he is embarrassed to explain, whatever he does not understand, he attributes to *Nous*. It is here we see the force of his opinion respecting Chance as an unascertained cause: what others called the effect of Chance, he called the effect of the universal Intelligence.

Those who have read the *Phædo*,—and who has not read it in some shape or other, either in the original, or in the dim and misty version of some translator?—those who have read the *Phædo*, we say, will doubtless remember the passage in which Socrates is made to express his poignant disappointment at the doctrine of Anaxagoras, to which he had at first been so attracted. This passage has an air of authenticity. It expresses a real disappointment, and the disappointment of Socrates, not merely of Plato. We believe firmly that Socrates is here expressing his own opinion; and it is rarely that we can say this of opinions promulgated by Plato under the august name of his master. Here is the passage in the misty version of Thomas Taylor.

'But having once heard a person reading from a certain book, composed as he said by Anaxagoras, when he came to that part in which he says that intellect orders and is the cause of all things, I was delighted with this cause, and thought that in a certain respect it was an excellent thing for intellect to be the cause of all; and I considered if this was the case, disposing intellect would adorn all things, and place everything in that situation in which it would subsist

in the best manner. If any one therefore should be willing to discover the cause through which everything is generated or corrupted, or is, he ought to discover how it may subsist in the best manner, or suffer, or perform anything else. In consequence of this therefore, it is proper that a man should consider nothing else, either about himself or about others, except that which is the most excellent and the best; but it is necessary that he who knows this should also know that which is subordinate, since there is one and the same science of both. But thus reasoning with myself, I rejoiced, thinking that I had found a preceptor in Anaxagoras, who would instruct me in the causes of things agreeable to my own conceptions; and that he would inform me in the first place whether the earth is flat or round, and afterwards explain the cause of its being so, adducing for this purpose that which is better, and showing that it is better for the earth to exist in this manner. And if he should say that it is situated in the middle, that he would besides this show that it was better for it to be in the middle—and if he should render all this apparent to me, I was so disposed as not to require any other species of cause; for I by no means thought, after he had said that all these were orderly disposed by intellect, he would introduce any other cause for their subsistence except that which shows that it is better for them to exist in this manner. Hence I thought that in rendering the cause common to each particular and to all things, he would explain that which is best for each, and is the common good of all. And indeed I would not have exchanged these hopes for a mighty gain! But having obtained his books with prodigious eagerness, I read them with great celerity, that I might with great celerity know that which is best and that which is base.

'But from this admirable hope, my friend, I was forced away, when in the course of my reading I saw him make no use of intellect, nor employ certain causes for the purpose of orderly disposing particulars, but assign air, æther, and water, and many other things equally absurd, as the causes

of things. And he appeared to me to be affected in a manner similar to him who should assert that all the actions of Socrates are produced by intellect; and afterwards, endeavouring to relate the causes of each particular action, should say that I now sit here because, in the first place, my body is composed of bones and nerves, and that the bones are solid, and are separated by intervals from each other; but that the nerves, which are by nature capable of intension and remission, cover the bones together with the skin in which they are contained. The bones, therefore, being suspended from their joints, the nerves, by straining and relaxing them, enable me to bend my limbs as at present; and through this cause I here sit in an inflected position. And again, should assign other such like causes of my now conversing with you, namely, voice and air and hearing, and a thousand other particulars, neglecting the true cause, that since it appeared to the Athenians better to condemn me on this account, it also appeared to me better and more just to sit here, and thus abiding, sustain the punishment which they have ordained me; for otherwise, by the dog, as it appears to me, these bones and nerves would have been carried long ago either into Megara or Bœotia through an opinion of that which is best, if I had not thought it more just and becoming to sustain the punishment ordered by my country, whatever it might be, than to withdraw myself and run away. But to call things of this kind causes is extremely absurd. Indeed, if any one should say that without possessing such things as bones and nerves I could not act as I do, he would speak the truth; but to assert that I act as I do at present through these, and that I operate with this intellect, and not from a choice of what is best, would be an assertion full of extreme negligence and sloth: for this would be the consequence of not being able to collect by division that the true cause of a thing is very different from that without which a cause would not be a cause.*

Now this reasoning we take to be an *ignoratio elenchi*. The illustration made use of is nothing to the purpose, and

would be admitted by Anaxagoras as true, without in the least impugning his argument.

The Intelligence, which Anaxagoras conceived, was, as we saw, in no wise a moral Intelligence: it was simply the *primum mobile*, the all-knowing and motive force by which the arrangement of the elements was effected. Men are still so accustomed to conceive the divine Intelligence as only a more perfect and exalted human Intelligence, that where they see no traces of the latter they are prone to question the existence of the former. When Anaxagoras says that *Nous* was the creative principle, men instantly figure to themselves a *Nous* similar to human intelligence. On examination they find that *such* an intelligence has no place in the doctrine, whereupon they declare that Intelligence has no place there; the *Nous*, they aver, means no more than Motion, and might have been called Motion.

But fortunately Simplicius has preserved a long passage from the work of Anaxagoras; we have already quoted a portion of it, and shall now select one or two sentences in which the *Nous*, as a cognitive power, is distinctly set forth; and we quote these the more readily because Ritter, to whom we are indebted for the passage, has not translated it:—‘Intelligence is, of all things, the subtlest and purest, and has entire knowledge of all. Everything which has a soul, whether great or small, is governed by the Intelligence (*νοῦς κρατεῖ*). Intelligence knows all things (*πάντα ἔγνω νοῦς*), both those that are mixed and those that are separated; and the things which ought to be, and the things which were, and those which now are, and those which will be; all are arranged by Intelligence (*πάντα διεκόσμησε νοῦς**)’.

The relation in which the system of Anaxagoras stands to other systems may be briefly characterised. The Infinite Matter of the Ionians became in his hands the *homœomeria*.

* It would be needless after this to refer to the numerous expressions of Aristotle in confirmation. The critical reader will do well to consult TRENBLENBURG, *Aristot. de Anim.*, p. 466 et seq. PLATO, in speaking of the *νοῦς*, adds καὶ ψυχῇ.—*Cratylus*, p. 400.

Instead of one substance, such as Water, Air, or Fire, he saw the necessity of admitting Many substances. At the same time, he carried out the Pythagorean and Eleatic principle of The One; thus avoiding the dialectical thrusts of Zeno against the upholders of The Many. Hegel and M. Cousin would call this eclecticism; and in one sense they would be correct; but inasmuch as Anaxagoras was led to his doctrine by the development which the Ionian and the Eleatic principles had taken, and was not led to it by any eclectic method, we must protest against the application of such a name. There was a truth dimly recognised by the Ionians, namely, that the material phenomena are all reducible to some *noumenon*, some ἀρχή. What that Beginning was, they variously sought. Anaxagoras also sought it; and his doctrine of perception convinced him that it could not be One principle, but Many; hence his *homœomeriæ*. So far he was an Ionian. But there was also a truth dimly seen by the Eleatics, namely, that The Many could never be resolved into One; and as without One there could not be Many, and with the Many only there could not be One; in other words, as God must be The One from whom the multiplicity of things is derived, the necessity of admitting The One as The All and the Self-existent was proved. This reasoning was accepted by Anaxagoras. He saw that there were Many things; he saw also the necessity for The One. In so far he was an Eleatic.

Up to this point the two doctrines had been at variance: a chasm of infinite depth yawned between them. Zeno's invention of Dialectics was a result of this profound difference. It was reserved for Anaxagoras to bridge over the chasm which could not be filled up. He did so with consummate skill. He accepted both doctrines, with some modifications, and proclaimed the existence of the Infinite Intelligence who was the Architect of the Infinite Matter. By this means he escaped each horn of the dilemma: he escaped that which gored the Ionians, namely, as to *how* and *why* the Infinite Matter became fashioned into worlds and beings, since Matter

by itself can only be Matter. He escaped that which gored the Eleatics, as to *how* and *why* the Infinite One, who was pure and unmixed, became the Infinite Many, impure and mixed, since one thing could never be more than one thing: it must have some other thing on which to act, for it cannot act upon itself. Anaxagoras escaped both by his dualistic theory of Mind fashioning, and Matter fashioned.

A similar bridge was thrown by him over the deep chasm separating the Sensationalists from the Rationalists, with respect to the origin of knowledge. He admitted both Sense and Reason; they had only admitted either Sense or Reason.

These two points entitle Anaxagoras to a very high rank in the history of Philosophy.

§ III. EMPEDOCLES.

I am forced to differ from all historians I have consulted, except De Gerando, who hesitates about the matter, respecting the place occupied by Empedocles. Brucker classes him among the Pythagoreans; Ritter, amongst the Eleatics; Zeller and Hegel, as the precursor of the Atomists, who precede Anaxagoras; Renouvier, as the precursor of Anaxagoras; Tennemann places Diogenes of Apollonia between Anaxagoras and Empedocles, but makes Democritus precede them. When I come to treat of the doctrines of Empedocles, I shall endeavour to show the filiation of ideas from Anaxagoras. Meanwhile it is necessary to examine the passage in Aristotle, on which very contradictory opinions have been grounded.

In the 3rd chapter of the 1st book of Aristotle's *Metaphysics*, after a paragraph on the system of Empedocles, occurs this passage: 'But Anaxagoras of Clazomenæ being superior to him (Empedocles) in respect of age, but inferior to him in respect of opinions, said that the number of principles was infinite.' In the words '*superior*' and '*inferior*'

the antithesis of the original is preserved; but it would be less equivocal to say 'older' and 'inferior.'

There are two other interpretations of this passage. One of them is that of M. Cousin (after Hegel), who believes that the antithesis of Aristotle is meant to convey the fact that Anaxagoras, although older in point of time, is more recent in point of published doctrine than Empedocles, having written after him. This is his translation: 'Anaxagoras, qui naquit avant ce dernier, mais qui écrivit après lui.'

The second is that adopted by M. Renouvier from M. Ravaisson, who interprets it as meaning that the doctrine of Anaxagoras, though more ancient in point of publication, is more recent in point of thought: *i.e.* philosophically more developed, although historically earlier.

I believe both these interpretations to be erroneous. There is no ground for them except the antithesis of Aristotle; and the original of this disputed passage is, 'Ἀναξαγόρας δὲ ὁ Κλαζομένιος τῇ μὲν ἡλικίᾳ πρότερος ὢν τούτου, τοῖς δ' ἔργοις ὑστερος: which is rendered by MM. Pierron and Zévort: 'Anaxagore de Clazomène, l'aîné d'Empédocle, n'était pas arrivé à un système aussi plausible.*'

This agrees with my version. I confess, however, that on a first glance M. Cousin's version better preserves the force of the antithesis τῇ μὲν ἡλικίᾳ πρότερος—τοῖς δ' ἔργοις ὑστερος. But other reasons prevent a concurrence in this interpretation. MM. Pierron and Zévort, in their note on the passage, remark: 'Mais les mots ἔργῳ, ἔργοις, dans une opposition, ont ordinairement une signification vague, comme *re, revera*, chez les Latins, et, chez nous, *en fait, en réalité*.' The force of the objection does not strike me. If Anaxagoras was *in fact, in reality*, posterior to Empedocles, we can only understand this in the sense M. Cousin has understood Aristotle; and moreover, MM. Pierron and Zévort here contradict their translation, which says that, in point of fact, the system of Anaxagoras was not so plausible as that of Empedocles.

* *La Métaphysique d'Aristote*, i. 233.

More weight must be laid on the meaning of ὑστερος, which certainly cannot be exclusively taken to mean posterior in point of time. In the 11th chapter of Aristotle's 5th book he treats of all the significations of πρότερος and ὑστερος. One of these significations is superiority and inferiority. In the sense of inferiority ὑστερος is often used by the poets. Thus Sophocles:—

ὦ μισητὸν ἦθος, καὶ γυναικὸς ὑστερον!
O shameful character, below a woman!

'Inferior' is the primitive meaning; in English we say, 'second to none,' for 'inferior to none.'

This meaning of ὑστερος, namely, of inferiority, is the one always understood by the old commentators on the passage in question; none of them understood a chronological posteriority. Πρότερος indicates priority in point of time; ὑστερος inferiority in point of merit. Thus Philoponus: 'Prior quidem tempore, sed posterior et mancus secundum opinionem' (fol. 2 a); and the anonymous scholiast of the Vatican MS.: πρότερος γοῦν τῷ χρόνῳ, ἀλλ' ὑστερος καὶ ἐλλείπων κατὰ τὴν δόξαν—'first indeed in time, but second and inferior in point of doctrine.'

The only question which now remains to be answered in order to establish the truth of the foregoing interpretation of ὑστερος, is this: Did Aristotle regard the system of Anaxagoras as *inferior* to that of Empedocles?

This question can be answered distinctly in the affirmative. The reader will remember the passage in which Aristotle blames Anaxagoras for never employing his First Cause (Intelligence) except upon emergencies. Aristotle continues thus: 'Empedocles employs his causes more abundantly, though not indeed sufficiently,—Καὶ Εμπεδοκλῆς ἐπὶ πλέον μὲν τούτῳ χρήται τοῖς αἰτίοις, οὐ μὲν οὔτε ἱκανῶς.—Met i. 4.

Anaxagoras was born about the 70th Olympiad; Empedocles, by general consent, is said to have flourished in the 84th Olympiad: this would make Anaxagoras at least fifty-six years old at the time when Empedocles published his doctrine, after which age it is barely probable that Anaxa-

goras would have begun to write; and even this probability vanishes when we look back upon the life of Anaxagoras, who was teaching in Athens about the 76th or 77th Olympiad, and who died at Lampsacus, in exile, in the 88th Olympiad, viz. sixteen years after the epoch in which Empedocles is said to have flourished.

Empedocles was born at Agrigentum, in Sicily, and flourished about the 84th Olympiad (B.C. 444). Agrigentum was at that period at the height of its splendour, and was a formidable rival to Syracuse. Empedocles, descended from a wealthy and illustrious family, acquired a high reputation by his resolute adherence to the democratic party. Much of his wealth is said to have been spent in a singular but honourable manner: namely, in bestowing dowries on poor girls, and marrying them to young men of rank and consequence. Like most of the early philosophers, he is supposed to have been a great traveller, and to have gathered in distant lands the wondrous store of knowledge which he displayed. It was assumed that only in the far East could he have learned the potent secrets of Medicine and Magic; only from the Egyptian Magi could he have learned the art of Prophecy.

It is probable, however, that he did travel into Italy, and to Athens. But in truth we can mention little of his personal history that is not open to question. His name, like that of Pythagoras, passed easily into the regions of fable. The same august majesty of demeanour and the same marvellous power over nature are attributed to both. Miracles were his pastimes. In prophecy, in medicine, in power over the winds and rains, his wonders were so numerous and so renowned, that when he appeared at the Olympic Games all eyes were reverentially fixed upon him. His dress and demeanour accorded with his reputation. Haughty, impassioned, and eminently disinterested in character, he refused the government of Agrigentum when freely offered him by the citizens; but his love of distinction showed itself in priestly garments, a golden girdle, the Delphic crown, and a numerous train of attendants. He proclaimed himself to be a God whom men

and women reverently adored. But we must not take this literally: he probably only 'assumed by anticipation an honour which he promised all soothsayers, priests, physicians, and princes of the people.'

Fable has also taken advantage of the mystery which overhangs his death, to create out of it various stories. One relates that, after a sacred festival, he was drawn up to heaven in a splendour of celestial effulgence. Another and more popular one is, that he threw himself headlong into the crater of Mount Ætna, in order that he might pass for a God, the cause of his death being unknown; but one of his brazen sandals, thrown out in an eruption, revealed the secret.

A similar uncertainty exists as to his teachers and his writings. Pythagoras, Parmenides, Xenophanes, and Anaxagoras have all been positively named as his teachers. Unless we understand the word teachers in a figurative sense, we must reject these statements. Diogenes Laertius, who reports them, does so with an absence of criticism which would be remarkable in another.* Considering that there was, at least, one hundred and forty years between Pythagoras and Empedocles, we need no further argument to disprove any connection between them.

Diogenes, on the authority of Aristotle (as he says), attributes to Empedocles the invention of Rhetoric; and Quintilian (iii. c. 1) has repeated the statement. We have no longer the work of Aristotle; but, as Ritter says, the assertion must have arisen from a misunderstanding, or have been said in jest by Aristotle, because Empedocles was the teacher of Gorgias: most likely from a misunderstanding, since Sextus Empiricus mentions Aristotle as having said that Empedocles first *incited* or *gave an impulse* to Rhetoric.† Aristotle, in his *Rhetoric*, declares that Corax and Tisias were the first to publish a written Treatise on Eloquence.

* DIOGENES is one of the stupidest of the stupid race of compilers. His work is useful because containing extracts, but can rarely be relied on for anything else.

† Πρωτον κεινησέναι.—*Adv. Mat.* vii.

We feel the less hesitation in rejecting the statement of Diogenes, because in the very passage which succeeds he is guilty of a very gross misquotation of Aristotle, who, as he says, 'in his book of *The Poets* speaks of Empedocles as Homeric, powerful in his eloquence, rich in metaphors, and other poetical figures.*' Now this work of Aristotle on the Poets is fortunately extant, and it proclaims the very reverse of what Diogenes alleges. Here is the passage:—'Custom, indeed, connecting the *poetry* or *making* with the *metre*, has denominated some elegiac poets, other epic poets: thus distinguishing poets, not according to the nature of their imitation, but according to that of their metre only; for even they who composed treatises of Medicine, or Natural Philosophy in verse, are denominated *Poets*: yet Homer and Empedocles have nothing in common except their metre; the former, therefore, just merits the name of *Poet*; the other should rather be called a *Natural Philosopher* than a *Poet*.†

The diversity of opinion with respect to the position of Empedocles, indicated at the opening of this chapter, is not without significance. That men such as Hegel, Ritter, Zeller, and Tennemann should see reasons for different classification cannot be without importance to the historian. Their arguments destroy each other; but it does not therefore follow that they all build upon false grounds. Each view has a certain truth in it; but not the whole truth. The cause of the difference seems to be this: Empedocles has some of the Pythagorean, Eleatic, Heraclitic, and Anaxagorean in his system; so that each historian, detecting one of these elements, and omitting to give due importance to the others, has connected Empedocles with the system to which that one element belongs. Ritter and Zeller have, however, been

* DIOG. LAERT. lib. viii. c. ii. § 3.

† *De Poet.*, c. i. It is indeed quite possible that Diogenes may have had before him a book *περί ποιητῶν*, perhaps one of the many spurious treatises current under Aristotle's name; but it is not probable that Aristotle would have expressed an opinion so contrary to the one given in his authentic work.

aware of some of the complex relations of the doctrine, but failed, we think, in giving it its true position.

Respecting human knowledge, Empedocles belongs partly to the Eleatics. With them, he complained of the imperfection of the Senses; and looked for truth only in Reason, which is partly human and partly divine: it is partly clouded by the senses. The divine knowledge is opposed to sensuous knowledge; for man cannot approach the divine, neither can he seize it with the hand nor the eye. Hence Empedocles conjoined the duty of contemplating God in the mind. But he appears to have proclaimed the existence of this divine knowledge without attempting to determine its relation to human knowledge. In this respect he resembles rather Xenophanes than Parmenides.*

We have no clear testimony of his having studied the works of Anaxagoras; but, if we had, it might not be difficult to explain his inferior theory of knowledge; for, in truth, the theory of Anaxagoras was too far in advance of the age to be rightly apprehended. Empedocles adhered to the Eleatic theory. With Xenophanes, he bewailed the delusion of the senses and experience. Listen to his lament:

Swift-fated and conscious, how brief is life's pleasureless portion!
Like the wind-driven smoke, they are carried backwards and forwards,
Each trusting to nought save what his experience vouches,
On all sides distracted; yet wishing to find out the whole truth,
In vain; neither by eye nor ear perceptible to man,
Nor to be grasped by mind: and thou, when thus thou hast wandered,
Wilt find that no further reaches the knowledge of mortals.

These verses seem to indicate a scepticism of Reason as well as of the Senses; but other passages show that he upheld the integrity of Reason, which he thought was only prevented from revealing the whole truth because it was imprisoned in the body. Mundane existence was, in his system, the doom of such immortal souls as had been disgraced from Heaven. The Fall of Man he thus distinctly enunciated:

* Having quoted Aristotle's testimony of the sensuous nature of knowledge in the Empedoclean theory, we need only here refer to it; adding that in this respect Empedocles ranks with Parmenides rather than with Xenophanes.

This is the law of Fate, of the Gods an olden enactment,
If with guilt or murder a Dæmon * polluteth his members,
Thrice ten thousand years must he wander apart from the blessed.
Hence, doomed I stray, a fugitive from Gods and an outcast,
To raging strife submissive.

But he had some more philosophical ground to go upon when he wished to prove the existence of Reason and of the Divine Nature. He maintained that like could only be known by like: through earth we learn the earth, through fire we learn fire, through strife we learn strife, and through love we learn love. If, therefore, † like could only be known by like, the Divine could only be known by Divine Reason; and, inasmuch as the Divine is recognised by man, it is a proof that the Divine exists. Knowledge and Existence mutually imply each other.

Empedocles resembles Xenophanes also in his attacks on anthropomorphism. God, he says, has neither head adjusted to limbs like human beings, nor legs, nor hands:

He is, wholly and perfectly, mind ineffable, holy,
With rapid and swift-glancing thought pervading the whole world.

We may compare these verses with the line of Xenophanes—

Without labour he ruleth all things by reason and insight.

Thus far Empedocles belonged to the Eleatics. The traces of Pythagoras are fewer; for we cannot regard as such all those analogies which the ingenuity of some critics has detected.‡ In his life, and in his moral precepts, there is a strong resemblance to Pythagoras; but in his philosophy we see none beyond the doctrine of metempsychosis, and the consequent abstinence from animal food.

Heraclitus had said there was nothing but a perpetual flux of things, that the whole world of phenomena was as a

* An immortal soul.

† We are here thinking for Empedocles; we have no other authority for this statement, than that something of the kind is wanting to make out a plausible explanation of what is only implied in the fragments extant. The fragments tell us that he believed in Reason as the transcendent faculty; and also that Reason did in some way recognise the Divine. All we have done is to supply the link wanting.

‡ See them noticed in ZELLER, *Philos. der Griechen*, pp. 169-173 (1845).

flowing river, ever-changing yet apparently the same. Anaxagoras had also said that there was no creation of elements but only an arrangement. Empedocles was now to amalgamate these views. 'Fools!' he exclaims,

Who think aught can begin to be which formerly was not,
Or, that aught which is, can perish and utterly decay.*
Another truth I now unfold: no natural birth
Is there of mortal things, nor death's destruction final;
Nothing is there but a mingling, and then a separation of the mingled.
Which are called a birth and death by ignorant mortals.†

So distinct a relationship as these verses manifest towards both Heraclitus and Anaxagoras will account for the classification adopted by Hegel, Zeller, and Renouvier; at the same time it gives greater strength to our opinion of Empedocles as the successor of these two.

The differences are however as great as the resemblances. Having asserted that all things were but a mingling and a separation, he must have admitted the existence of certain primary elements which were the materials mingled.

Heraclitus had affirmed Fire to be both the principle and the element; both the moving, mingling force, and the mingled matter. Anaxagoras, with great logical consistency, affirmed that the primary elements were *homœomeriæ*, since nothing could proceed from nothing, and whatever was arranged must, therefore, be an arrangement of primary elements. Empedocles affirmed that the primary elements were Four, viz. Earth, Air, Fire, and Water: out of these all other things proceed; all things are but the various minglings of these four.

Now, that this is an advance on both the preceding conceptions will scarcely be denied; it bears indubitable evidence of being a later conception, and a modification of its predecessors. Nevertheless, although superior as a physical view, it has not the logical consistency of the view maintained

* Compare Anaxagoras, as quoted p. 77: 'Wrongly do the Greeks suppose that aught begins or ceases to be.'

† Compare Anaxagoras: 'So that all-becoming might more properly be called becoming mixed, and all-corruption becoming separate.'

by Anaxagoras; for, as Empedocles taught that like can only be known by like, *i. e.* that existence and knowledge were identical and mutually implicative, he ought to have maintained that whatever is recognised by the mind as distinct, must be distinct *in esse*.

With respect to the Formative Power, we see the traces of Heraclitus and Anaxagoras in about the same proportion. Heraclitus maintained that Fire was impelled by irresistible Desire to transform itself into some determinate existence. Anaxagoras maintained that the infinite Intelligence was the great Architect who arranged all the material elements, the Mind that controlled and fashioned Matter. The great distinction between these two systems is, that the Fire transforms itself, the *Nous* transforms something which is radically different from itself. Both these conceptions were amalgamated by Empedocles. He taught that Love was the creative power. Wherever there is a mixture of different elements Love is exerted.

Here we see the Desire of Heraclitus sublimed into its highest expression, and the *Nous* of Anaxagoras reduced to its moral expression, Love. The difficulties of the Heraclitean doctrine, namely, as to how Fire can ever become anything different from Fire, are avoided by the adoption of the Anaxagorean dualism; while the difficulties of the Anaxagorean doctrine, namely, as to how the great Arranger was moved and incited to arrange the primary elements, are in some measure avoided by the natural desire of Love (Aphrodite).

But there was a difficulty still to be overcome. If Love was the creator, that is, the Mingler, what caused separation? To explain this, he had recourse to Hate. As the perfect state of supramundane existence was harmony, the imperfect state of mundane existence was Discord. Love was, therefore, the Formative Principle, and Hate the Destructive. Hence he said that

All the members of God war together, one after the other.

This is but the phrase of Heraclitus, 'Strife is the parent of all things.' It is nevertheless most probable that Empedocles

regarded Hate as only a mundane power, as only operating on the theatre of the world, and nowise disturbing the abode of the Gods.* For, inasmuch as Man is a fallen and perverted God, doomed to wander on the face of the earth, sky-aspiring, but sense-clouded; so may Hate be only perverted Love, struggling through space. Does not this idea accord with what we know of his opinions? His conception of God, that is, of the One, was that of a 'sphere in the bosom of harmony fixed, in calm rest, gladly rejoicing.' This quiescent sphere, which is Love, exists above and around the moved World. Certain points are loosened from the combination of the elements, but the unity established by Love continues. Ritter is convinced that 'Hate has only power over the smaller portion of existence, over that part which, disconnecting itself from the whole, contaminates itself with crime, and thereby devolves to the errors of mortals.'

Our account of Empedocles will be found to vary considerably from that in Aristotle; but our excuse is furnished by the great Stagirite himself, who is constantly telling us that Empedocles gave no reasons for his opinions. Moreover, Aristotle makes us aware that his own interpretation is open to question; for he says, that this interpretation can only be obtained by pushing the premises of Empedocles to their legitimate conclusions; a process which destroys all historical integrity, for what thinker *does* push his premises to their utmost limits?

§ IV. DEMOCRITUS.

The laughing Philosopher, the traditional antithesis to Heraclitus, was born at Abdera (the new settlement of the Teians after their abandonment of Ionia), in the 80th Olympiad (B. C. 460). His claim to the title of Laughter, ὁ γελασῖνος, has been disputed, and by moderns generally rejected. Perhaps the native stupidity of his countrymen, who were renowned for abusing the privilege of being stupid, afforded

* An opinion subsequently put forth by PLATO in the *Phædrus*.

him incessant matter for laughter. Perhaps he was by nature satirical, and thought ridicule the test of truth. He was of a noble and wealthy family, so wealthy that it entertained Xerxes at Abdera. Xerxes in recompense left some of his Magi to instruct the young Democritus. Doubtless it was their tales of the wonders of their native land, and of the deep unspeakable wisdom of their priests, which inspired him with the passion for travel. 'I, of all men,' he says, 'of my day, have travelled over the greatest extent of country, exploring the most distant lands; most climates and regions have I visited, and listened to the most experienced and wisest of men; and in the calculations of line-measuring no one hath surpassed me, not even the Egyptians, amongst whom I sojourned five years.' In travel he spent his patrimony: but he exchanged it for an amount of knowledge which no one had previously equalled. The Abderites, on his return, looked on him with vague wonder. The sunburnt traveller brought with him knowledge which, to them, must have appeared divine. He exhibited a few samples of his lore, foretold unexpected changes in the weather, and was at once exalted to the summit of that power to which it is a nation's pride to bow. He was offered political supremacy, but wisely declined it.

It would be idle to detail here the various anecdotes which tradition hands down respecting him. They are mostly either impossible or improbable. That, for instance, of his having put out his eyes with a burning-glass, in order that he might be more perfectly and undisturbedly acquainted with his reason, is in violent contradiction to his theory of the eye being one of the great inlets to the soul. Tradition is less questionable in its account of his having led a quiet sober life, and of his dying at a very advanced age. More we cannot credit.

Respecting his Philosophy there is some certain evidence; but it has been so variously interpreted, and is in many parts so obscure, that historians have been at a loss to give it its due position in relation to other systems. Reinhold, Brandis,

Marbach, and Hermann view him as an Ionian; Buhle and Tenneman, as an Eleatic; Hegel, as the successor of Heraclitus, and the predecessor of Anaxagoras; Ritter, as a Sophist; and Zeller, as the precursor of Anaxagoras. Of all these attempts at classification, that by Ritter seems to me the worst. Because Democritus has an occasional phrase implying great vanity—and those mentioned by Ritter seem to us to imply nothing of the kind—he is said to be a Sophist!

Democritus is distinguished from the Ionians by the denial of all sensible quality to the primary elements; from the Eleatics by his affirmation of the existence of a multiplicity of elements; from Heraclitus on the same ground; from Anaxagoras, as we shall see presently; and from Empedocles, by denying the Four Elements, and the Formative Love. All these differences are radical. The resemblances, such as they are, may have been coincidences, or derived from one or two of the later thinkers: Parmenides and Anaxagoras, for example.

What did Democritus teach? This question we will endeavour to answer somewhat differently from other historians; but our answer shall be wholly grounded on precise and certain data, with no other novelty than that of developing the system from its central principles.

To commence with Knowledge, and with the passage of Aristotle, universally accredited though variously interpreted: 'Democritus says, that either nothing is true, or what is true is not evident to us. Universally, in his system, the sensation constitutes the thought, and as at the same time it is but a change [in the sentient being], the sensible phenomena (i.e. *sensations*) are of necessity true.* This pregnant passage means, I think, that sensation, inasmuch as it is sensation, must be true: that is, true *subjectively*; but sensation, inasmuch as it is sensation, cannot be true *objectively*. M. Renouvier thinks that Democritus was the first to intro-

* "Ἦτοι οὐθὲν εἶναι ἀληθὲς ἢ ἡμῖν γ' ἀδηλον. "Ὅλως δὲ διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἴσθησιν ταύτην δ' εἶναι ἀλλοίωσιν, τὸ φαινόμενον κατὰ τὴν αἴσθησιν ἐξ ἀνάγκης ἀληθὲς εἶναι.—*Metaph.* iv. 5.

duce this distinction; but our readers will remember that it was the distinction established by Anaxagoras. Sextus Empiricus quotes the very words of Democritus: The sweet exists only *in form*, the bitter *in form*, the hot *in form*, the cold *in form*, colour *in form*; but in *causal reality* (αἰτία) * only atoms and space exist. The sensible things which are supposed by opinion to exist have no real existence, but only atoms and space exist.† When he says that sweetness, heat, colour, etc., exist *in form* only, he means that they are sensible images constantly emanating from things; a notion we shall explain presently. A little further on, Sextus reports the opinion, that we only perceive that *which falls in upon us* according to the disposition of our bodies; all else is hidden from us.

Neither Condillac nor Destutt de Tracy has more distinctly identified sensation and thought, than Democritus has in the above passages. But he does so in the spirit of Kant rather than that of Condillac; for, although with the latter he would say, 'Penser, c'est sentir,' yet he would with the former draw the distinction between phenomenal and noumenal perception.

But did sensation constitute all knowledge? Was there nothing to guide man but the reports of his senses? Democritus said there was *Reflection*.‡

Reflection was not the source of absolute truth, but fulfilled a controlling office, and established certitude, as far as there could be certitude in human knowledge. Democritus, aware that most of our conceptions are derived through the Senses, was also aware that many of them were utterly independent, and in seeming defiance of the Senses. Thus the 'infinitely small' and the 'infinitely great' escape Sense, but are affirmed by Reflection. So also the atoms, which his Reason told him were the primary elements of things, could never have become known by Sense.

* Modern editors read ἐν, 'in reality.' We are inclined however to preserve the old reading, as more antithetical to νόμος.

† *Adv. Mathem.* vii. 163.

‡ Διάνοια: etymology, no less than psychology, justifies this translation.

He was not content with the theory of Anaxagoras. There were difficulties which remained unsolved by it; which, indeed, had never been appreciated. Democritus set himself to solve the grand problem. *How do we perceive external things?* It is no satisfactory answer to say that we perceive them by the Senses. This is no better an explanation than that of the occult quality of opium, given by Molière's physician: 'L'opium endormit parcequ'il a une vertu soporifique.' The question arises:—*How is it that the Senses perceive?*

No one had asked this question; to have asked it, was to form an era in the history of Philosophy. Men began by reasoning on the reports of the Senses, unsuspecting of error: when they saw anything, they concluded that what they saw existed and existed *as* they saw it. Afterwards came others who began to question the accuracy of the Senses. Lastly, came those who denied that accuracy altogether, and pronounced the reports to be mere delusions. Thus the question forced itself on the mind of Democritus—In what manner could the Senses perceive external things? Once settle the *modus operandi*, and then the real efficacy of the Senses may be estimated.

The hypothesis by which he attempted to explain perception was both ingenious and bold; and many centuries elapsed before a better one was suggested. He supposed that all things were constantly throwing off images of themselves (εἰδωλα), which, after assimilating to themselves the surrounding air, enter the soul by the pores of the sensitive organ. The eye, for example, is composed of aqueous humours; and water sees. But how does water see? It is diaphanous, and receives the image of whatever is presented to it.

This is a very rude hypothesis; but did not philosophers, for centuries, believe that their senses received *impressions* of things, as wax receives the impressions of a seal? and did they not suppose that *images* of things were reflected in the mind? This latter hypothesis is, perhaps, less obviously fantastic and gratuitous; but how does the mind become a

mirror reflecting the images? The hypothesis stands as much in need of explanation as the phenomenon it pretends to explain.

The hypothesis of Democritus, once admitted, serves its purpose; at least to a considerable extent. Only the external surface of a body is thrown off in the shape of an εἶδωλον or image, and even that imperfectly and obscurely. The figure thrown off is not a perfect image of the object throwing it off. It is only an image of the external form, and is subject to variations in its passage to the mind. This being the case, the strictly phenomenal nature of all knowledge is necessarily deduced. The idols or images, being themselves imperfect, our knowledge is necessarily imperfect.

With this theory of Knowledge how could he answer the other, greater, question of Creation? It is said that he rejected The One of the Eleatics, The Four of Empedocles, and the *Homœomeriæ* of Anaxagoras, and declared Atoms, invisible and intangible, to be the primary elements; and that all things were but modes of one of the triple arrangements, namely, configuration, combination, and position. The atom, being indivisible, is necessarily one: and, being one, is necessarily self-existent. His atoms were concrete bodies, each with its own magnitude, figure, and movement: escaping our sensuous perception because of their smallness, but capable of being perceived by minds of more delicate sensibility. It was through the movements and collisions of these atoms that our Cosmos acquired its distinctive forms and laws. He did not find it necessary, with Anaxagoras and Empedocles, to invoke the aid of any external agency in setting these atoms in motion. On the contrary, he thought that they had a motion of their own as a constituent property. He further maintained that every motion was necessarily determined by one or more antecedent motions. Indeed, he recognised the action of fixed laws everywhere, what is called Chance being only the name in which men cloak their ignorance of Law.* By this hypothesis, Demo-

* MULLACH: *Fragmenta*, p. 167.

critus satisfied the demands of those who declared that the self-existent must be One; and of those who declared that there were many things existing, and that the One could never be more than the One, never become the Many. He amalgamated the Ionian and Eleatic schools in his speculation, correcting both. He, doubtless, derived this idea from the *homœomeriæ* of Anaxagoras; or, as those who place Anaxagoras later than Democritus would say, originated this idea. It becomes a question, therefore, which of these speculations bears the impress of greater maturity. On this question we cannot hesitate to pronounce. The idea of *homœomeriæ* betrays its more primitive nature in this: it attributes *positive* qualities to atoms, which qualities are not changed or affected by combination or arrangement. The idea of the atom divested of all quality, and only assuming that quality as phenomenal when in combination with other atoms, and changing its quality with every change of combination, is indubitably a far more scientific speculation; it is also obviously later in point of development.

From the axiom that only 'like can act upon like,' Anaxagoras formed his *homœomeriæ*. Democritus accepted the axiom, but gave it a wider application. If only like can act upon like, said he, then must all things be alike *in esse*; and the only differences are those of phenomena, *i. e.* of manifestation; these depend on combination and arrangement.

Atomism is homœomerianism stripped of qualities. It is therefore the system of Anaxagoras greatly improved.

The Atomism of Democritus has not been sufficiently appreciated as a speculation. Leibnitz, many centuries afterwards, was led to a doctrine essentially similar; his celebrated 'Monadologie' is but Atomism, with a new terminology. Leibnitz called his Monad a *force*, which to him was the *prima materia*. Democritus also denied that atoms had any weight; they had only force, and it was the impulsion given by superior force which constituted weight. It is worthy of remark that not only did these thinkers concur in their doctrine of atomism, but also, as we have seen, in their

doctrine of the origin of knowledge: a coincidence which gives weight to the supposition that in both minds one doctrine was dependent on the other.*

Attempts have been made, from certain expressions attributed to Democritus, to deduce an Intelligence, somewhat similar to that in the Anaxagorean doctrine, as the Formative Principle. But the evidence is so small and so questionable, that we refrain from pronouncing on it. Certain it is that he attributed the formation of things to Destiny; but whether that Destiny was intelligent or not is uncertain.

In conclusion, we may observe that his system was an advance on that of his predecessors. In the two great points of psychology and physics, which we have considered at length, it is impossible to mistake both a very decided progress, and the opening of a new line in each department.

* Aucune des idées que l'antiquité nous a transmises n'a eu une plus grande ni même une pareille fortune. Il faut que les inventeurs de la doctrine atomistique soient tombés de prime-abord, ou sur la clef même des phénomènes naturels, ou sur une conception que la constitution de l'esprit humain lui suggère inévitablement dans les efforts qu'il fait pour saisir la clef des phénomènes naturels.—COURNOT: *Traité de l'Enchaînement des Idées fondamentales dans les Sciences et dans l'Histoire*, 1861, i. 245.

SUMMARY OF THE TWO FIRST EPOCHS.

In the various attempts of Philosophy which we have hitherto followed, three remarkable results have been attained, and these contain, as it were, the germs of all subsequent speculation. First, the disengagement of thought from theological bias, and the endeavour to find in things themselves an explanation of their various changes.* It was an objective aim though the subjective Method was employed. It was a failure, because the Method was incompetent.

‘During the century and a half between Thales and the beginning of the Peloponnesian War,’ says Mr. Grote, ‘we have passed in review twelve distinct schemes of philosophy. Of most of these it may be fairly said that each speculated upon nature in an original vein of his own. Anaximenes and Diogenes, Xenophanes and Parmenides, Leukippus and Demokrites may indeed be coupled together as kindred pairs, yet by no means in such a manner that the second of the two is a mere disciple and copyist of the first. Such abundance and variety of speculative genius and invention is one of the most remarkable facts in the history of the Hellenic mind. The prompting of intelligent curiosity, the thirst for some plausible hypothesis to explain the Kosmos and its generation, the belief that a basis might be found in the Kosmos itself apart from those mythical personifications which dwelt both in the popular mind and in the poetical Theogonies, the

* ‘Realismus war die erste Denkart. Alles Philosophiren geht davon aus einige Merkmale unter welchen die Dinge gedacht werden abzusondern und ihren Grund aufzusuchen zuerst in dem Zusammengesetzten selbst, in den Objecten, nicht in dem Verstande, der den Begriff des Objects erzeugt hat.’—TENNEMANN: *Gesch. der Phil.* i. 46.

mental effort required to select some known agency and to connect it by a chain of reasoning with the result, all this is a new phenomena in the human mind.*

The Second Result was a conviction of the uncertainty of Knowledge, dependent upon the Senses; and the consequent necessity of a thorough investigation of the tools with which any further attempt could be made. The failure of philosophers in solving the problem led them to examine the causes of the failure. From investigating cosmical facts they turned to the investigation of mental facts. Psychology was commenced.

The objective and subjective worlds thus became the domain of Philosophy. Ontology and Psychology were then, as now, its two great objects of research; and were then, as now, investigated on the same Method, with but slightly varying differences in the nature of the conclusions. Democritus is at the standing-point of Leibnitz; Heraclitus is at the standing-point of Hegel: a striking lesson of the incompetence of the Method!

The Third Result is the institution of Dialectics. The investigation into the sources and validity of Knowledge having proved the Senses to be fallacious and the Reason fallible, led to the necessity of a criticism of the modes of human thought, and a systematic exposition of the sources of error. Logic, or the science of philosophical tools, thus took its place beside Ontology and Psychology.

In these three departments all Philosophy is comprised. And these three were all evolved during the century and a half we have just surveyed. Our future course will make us acquainted with various changes of aspect, with various combinations and modifications of the Elements, but with no change in the nature of the problems, and with no change in the spirit of the search.

* GROTE: *Plato*, i. 89.

THIRD EPOCH.

The first crisis. The insufficiency of Philosophy to solve the problem of Existence and to establish a basis of certitude produces a sceptical indifference.

THE SOPHISTS.

§ I. WHAT WERE THEY?

THE Sophists are a much calumniated race. That they should have been so formerly is not surprising; that they should be so still, is an evidence that historical criticism is yet in its infancy. In raising our voices to defend them we are aware of the paradox; but looked at nearly, the paradox is greater on the side of those who credit and repeat the traditional account. In truth, we know of few charges so unanimous yet so paradoxical as that brought against the Sophists.* It is as if mankind had consented to judge of Socrates by the representation of him in *The Clouds*. The caricature of Socrates by Aristophanes is quite as near the truth as the caricature of the Sophists by Plato;† with this difference, that in the one case it

* It is proper to state that the novel view of the position and character of the Sophists advanced in this Chapter was published five years before the admirable Chapter of Mr. GROTE's *History of Greece*, wherein that erudite and thoughtful writer brings his learning and sagacity to the most thorough elucidation of the question it has yet received. In claiming priority in this point of historical criticism, it is right for me to acknowledge that Mr. Grote substantiates his view with overwhelming force of argument and citation; and in revising the present Chapter I have been much indebted to his criticisms and citations.

† See in particular that amusing dialogue the *Euthydemus*, which is quite as exaggerated as ARISTOPHANES.

was inspired by political, in the other by speculative antipathy.

On the Sophists we have only the testimony of antagonists; and the history of mankind clearly proves that the enmities which arise from difference of race and country are feeble compared with the enmities which arise from difference of creed: the former may be lessened by contact and intercourse; the latter are only aggravated. Plato had every reason to dislike the Sophists and their opinions; he therefore lost no occasion of ridiculing the one and misrepresenting the other. And it is worthy of especial remembrance that this hostility was peculiarly Platonic, and *not* Socratic; for, as Mr. Grote reminds us, there is no such marked antithesis between Socrates and the Sophists in the biographical work of Xenophon. Plato, however, and those who followed Plato, misrepresented the Sophists, as in all ages antagonists have misrepresented each other.

The Sophists were wealthy; the Sophists were powerful; the Sophists were dazzling, rhetorical, and not profound. Interrogate human nature—above all, the nature of philosophers—and ask what will be the sentiment entertained respecting these Sophists by their rivals. Ask the solitary thinker what is his opinion of the showy, powerful, but shallow rhetorician who usurps the attention of the world. The man of convictions has at all times a superb contempt for the man of mere oratorical or dialectical display. The thinker knows that the world is ruled by Thought; yet he sees Expression gaining the world's attention. He knows perhaps that he has within him thoughts pregnant with human welfare; yet he sees the giddy multitude intoxicated with the enthusiasm excited by some plausible fallacy, clothed in persuasive language. He sees through the fallacy, but cannot make others as clear-sighted. His warning is unheeded; his wisdom is spurned; his ambition is frustrated; the popular idol is carried onward in triumph. The neglected thinker would not be human if he bore this with equanimity. He does not. He is loud and angry in lamenting the fate of a

world that can be so led; loud and angry in his contempt of one who could so lead it. Should he become the critic or historian of his age, what exactness ought we to expect in his account of the popular idol?

Somewhat of this kind was the relation in which the Sophists and Philosophers stood to each other.

The Sophists were hated by some because they were powerful, by others because shallow; and were misrepresented by all. In later times their antagonism to Socrates has brought them ill-will; and this ill-will is strengthened by the very prejudice of the name. Could a Sophist be other than a cheat and a liar? As well ask, could a Devil be other than Evil? In the name of Sophist odious qualities are implied, and this implication perverts our judgment. Call the Sophists professors of rhetoric, which is their truest designation, and examine their history; it will then produce a very different impression.

Much discussion has been devoted to the meaning of the word Sophist, and to the supposed condemnation it everywhere carried. 'A Sophist, in the genuine sense of the word, was a wise man, a clever man, one who stood prominently before the public as distinguished for intellect or talent of some kind. Thus Solon and Pythagoras are both called Sophists; Thamyra, the skilful bard, is called a Sophist; Socrates is so denominated, not merely by Aristophanes, but by Æschines. Aristotle himself calls Aristippus, and Xenophon calls Antisthenes, both of them disciples of Socrates, by that name. Xenophon in describing a collection of instructive books calls them the writings of the old poets and Sophists. Plato is alluded to as a Sophist even by Isocrates; Isocrates himself was harshly criticised as a Sophist, and defends both himself and his profession. Lastly, Timon, who bitterly satirised all the philosophers, designated them all, including Plato and Aristotle, by the general name of Sophists.* This proves the vagueness with which the

* GROTE, *Hist. of Greece*, viii. 480.

term was employed: a like discrepancy might be detected in the modern use of the word 'metaphysician,' which is a term of honour or reproach according to the speaker. Zeller says that the specific name of Sophist at first merely designated one who taught philosophy for pay. The philosophy might be good or bad; the characteristic designated by the epithet Sophistical was its demand of money-fees. The narrower meaning was given it by Plato and Aristotle.* It matters little however what was the meaning attached to the name. Even were it proved that 'Sophist' was as injurious in those days as 'Socialist' in our own, it would no more prove that the Sophists really taught the doctrines attributed to them than the mingled terror and detestation with which 'Socialist doctrines' are described in almost all modern journals, pamphlets, speeches, and reviews, prove that the Socialists really teach what is there imputed to them.

We said it was a paradox to maintain that the Sophists really promulgated the opinions usually attributed to them; and by this we mean that not only are some of those opinions nothing but caricatures of what was really maintained, but also that in our interpretation of the others we grossly err, by a confusion of Christian with Heathen views of morality. Moderns cannot help regarding as fearfully immoral, ideas which by the Greeks were regarded as moral, or at least as not disreputable. For instance: the Greek orators are always careful to impress upon their audience, that in bringing a charge against any one they are actuated by the strongest personal motives; that they have been injured by the accused; that they have good honest hatred as a motive for accusing him. Can anything be more opposite to Christian feeling? A Christian accuser is just as anxious to extricate himself from any charge of being influenced by personal considerations, as the Greek was of making the contrary evident. A Christian seeks to place his motive to the account of abstract justice; and his statement would be received with

* ZELLER: *Philosophie der Griechen*, erster Theil, 1856, p. 750.

great suspicion were it known that a personal feeling prompted it. The reason of this difference is that the Christian Ethics do not countenance vengeance; the Greek Ethics not only countenanced vengeance, but very much reprobated *informers*: consequently, whoever made an accusation had to clear himself from the ignominy of being an informer, and to do so he showed his personal motives.

This example will prepare the reader to judge, without precipitancy, the celebrated boast attributed to the Sophists, that they could 'make the worse appear the better reason.' This was said to be the grand aim of their endeavours. This was called their avowed object. To teach this art, it is said, they demanded enormous sums; to learn it enormous sums were readily given, and given by many.

These assertions are severally false. We will take the last first. It is not true that enormous sums were demanded. Isocrates affirms that their gains were never very high, but had been maliciously exaggerated, and were very inferior to the gains of dramatic actors. Plato, a less questionable authority on such a point, makes Protagoras describe his system of demanding remuneration: 'I make no stipulation beforehand; when a pupil parts from me, I ask from him such a sum as I think the time and the circumstances warrant; and I add that if he deems the demand too great, he has only to make up his own mind what is the amount of improvement which my company has procured to him, and what sum he considers an equivalent for it. I am content to accept the sum so named by himself, only requiring him to go into a Temple and make oath that it is his sincere belief. Plato objects to this, and to every other mode of 'selling wisdom;' but, as Mr. Grote remarks, 'such is not the way in which the corrupters of mankind go to work.'

But let us waive the question of payment, to consider the teaching paid for. The Sophists, it is said, and believed, boasted that they could teach the art of making the worse appear the better reason; and in one sense this is true; but understanding this art as moderns have understood it, and

thereby forming our notion of the Sophists, let us ask, Is it credible that such an art should have been avowed, and, being avowed, should be rewarded, in a civilised state? Let us think, for an instant, of what are its moral, or rather its immoral, consequences. Let us reflect how utterly it destroys all morality; how it makes the very laws but playthings for dialectical subtlety. Then let us ask whether, as we understand it, any State could have allowed such open blasphemy, such defiance of the very fundamental principle of honesty and integrity, such demolition of the social contract?

Could any State do this? and was Athens that State? We ask the reader to realise for himself some notion of the Athenians as citizens, not merely as statues; to think of them as human beings, full of human passions, not simply as architects, sculptors, poets, and philosophers. Having done this, we ask him whether he can believe that these Athenians would have listened to a man proclaiming all morality a farce, and all law a quibble—proclaiming that for a sum of money he could instruct any one how to make an unjust cause appear a just one? Would not such a proclamation be answered with a shout of derision, or of execration, according to the belief in his sincerity? Could any charlatan, in the corruptest age, have escaped being stoned for such effrontery? Yet the Sophists were wealthy, by many greatly admired, and were selected as ambassadors on very delicate missions. They were men of splendid talents; of powerful connections. Around them flocked the rich and noble youth of every city they entered. They were the intellectual leaders of their age. If they had been what their adversaries describe them, Greece could only have been an earthly Pandemonium, where Belial was King.

To believe this is beyond our power. Indeed such a paradox it would be frivolous to refute, had it not been maintained for centuries. Some have endeavoured to escape it by maintaining that the Sophists were held in profound contempt; and certain passages are adduced from Plato in proof thereof. But the fact appears to us to be the reverse of this. The

wealth and power of the Sophists—the very importance implied in Plato's constant polemic against them—prove that they were not objects of contempt. Objects of aversion they might be to one party: the successful always are. Objects of contempt they might be, to some sincere and profound thinkers. The question here however is not one relating to individuals, but to the State. It is not whether Plato despised Gorgias, but whether Athens allowed him to teach the most unblushing and undisguised immorality. There have been daring speculators in all times. There have been men shameless and corrupt. But that there has been any speculator so daring as to promulgate what he knew to be grossly immoral, and so shameless as to avow it, is in such contradiction to our experience of human nature as at once to be rejected.*

It is evident, therefore, that in teaching the art of 'making the worse appear the better reason,' the Sophists were not guilty of anything held to be reprehensible; however serious thinkers, such as Plato and Aristotle, might detest the philosophy from which it sprang.

But if this art was not reprehensible, except to severe minds, such as Plato and Aristotle, it is clear that it could not have been the art which its antagonists and defamers have declared it to be. If, as we have shown, universal human nature would have rebelled against a teaching which was avowedly immoral, the fact that the Sophists were not stoned, but were highly considered and well paid, is proof that their teaching was either not what we are told it was, or that such teaching was not considered immoral by the Greeks. Both of these negatives will be found true. The teaching of the Sophists was demonstrably *not* what is usually attributed to them, and what they *did* teach was very far from being considered as immoral. Let us consider both these points.

* We are told by Sextus that Protagoras was condemned to death by the Athenians because he professed himself unable to say whether the Gods existed, or what they were, owing to the insufficiency of knowledge. Yet the Athenians are supposed to have tolerated the Sophists as they are understood by moderns

In the first place Mr. Grote has shown beyond dispute that the Sophists had *no* doctrine in common; they formed no sect or school of thought, such as modern Germans indicate under the name of *Die Sophistik*. There never was a *Sophistik*. Each teacher had his own doctrinal views, and was not more bound to the opinions of the others than a modern Barrister is bound to share the theology of the Bar, or than a modern teacher of Elocution is bound to vote on the same side with all other professors. No sooner is this fact apprehended, than the absurdity of attributing to 'the Sophists' opinions expressed by one Sophist, and that too in a caricature by Plato, is at once apparent. Moreover the absurdity of talking of the 'sophistical doctrine' becomes apparent, and we are forced to speak only of the 'sophistical art,' reserving for any special animadversion the special name of the offending sinner.

The Sophists taught the art of disputation. The litigious quibbling nature of the Greeks was the soil on which an art like that was made to flourish. Their excessive love of law-suits is familiar to all versed in Grecian history. The almost farcical representation of a lawsuit given by Æschylus in his otherwise awful drama, *The Eumenides*, shows with what keen and lively interest the audience witnessed even the very details of litigation. For such an appetite food would not long be wanting. Corax and Tisias wrote precepts of the art of disputation. Protagoras followed with dissertations on the most remarkable points of law; and Gorgias composed a set accusation and apology for every case that could present itself. People, in short, were taught to be their own advocates.

This was by no means an immoral art. If it *might* or *did* lead to immorality, few Greeks would have quarrelled with an art so necessary. 'Without some power of persuading or confuting, of defending himself against accusations, or, in case of need, accusing others, no man could possibly hold an ascendant position. He had probably not less need of this talent for private informal conversations to satisfy his own political partisans, than for addressing the public assembly

formally convoked. Even commanding an army or a fleet, without any laws of war or habit of discipline, his power of keeping up the good-humour, confidence, and prompt obedience of his men, depended not a little on his command of speech. Nor was it only to the leaders in political life that such an accomplishment was indispensable. In all democracies, and probably in several Governments which were not democracies but oligarchies of an open character, the courts of justice were more or less numerous, and the procedure oral and public; in Athens especially the *Dicasteries* were both very numerous and were paid for attendance. Every citizen had to go before them in person, without being able to send a paid advocate in his place, if he either required redress for wrong offered to himself, or was accused of wrong by another. There was no man therefore who might not be cast or condemned, or fail in his own suit, even with right on his side, unless he possessed some power of speech to unfold his case to the *Dicasts*, as well as to confute the falsehoods and disentangle the sophistry of an opponent. To meet such liabilities, from which no citizen, rich or poor, was exempt, a certain training in speech became not less essential than a certain training in arms.* Thus was it that even quibbling ingenuity, 'making the worse appear the better reason,' became a sort of virtue, because it was obtained only by that mastery over argument which was the Athenian's ambition and necessity. We can send a paid advocate to quibble for us, and do not therefore need such argumentative subtlety. But let us ask, are barristers pronounced the 'corruptors of mankind,' and is their art called the art of 'making the worse appear the better reason,' as if that, and that alone, were the purport of all pleading? Yet, in defending a criminal, does not every barrister exert his energy, eloquence, subtlety, and knowledge 'to make the worse appear the better reason'? Do we reprobate Sergeant Talfourd or Sir Frederick Thesiger, if they succeed in gaining their client's cause, although that cause be a bad one? On

* GROTE, viii. 463-4. Compare HEGEL, *Gesch. d. Phil.* ii. 11, 20.

the contrary, the badness of the cause makes the greatness of the triumph.

Now let us suppose Sergeant Talfourd to give lessons in forensic oratory; suppose him to announce to the world, that for a certain sum he would instruct any man in the whole art of exposition and debate, of the interrogation of witnesses, of the tricks and turning-points of the law, so that the learner might become his own advocate: this would be contrary to legal etiquette; but would it be immoral? Grave men might, perhaps, object that Mr. Talfourd was offering to make men cheats and scamps, by enabling them to make the worse appear the better reason. But this is a consequence foreseen by grave men, not acknowledged by the teacher. It is doubtless true that owing to oratory, ingenuity, and subtlety, a scamp's cause is sometimes gained; but it is also true that many an honest man's cause is gained, and many a scamp frustrated, by the same means. If forensic oratory does sometimes make the worse appear the better reason, it also makes the good appear in all its strength. The former is a necessary evil, the latter is the very object of a court of justice. 'If,' says Callicles, in defence of Gorgias, to Socrates, 'any one should charge you with some crime which you had not committed, and carry you off to prison, you would gape and stare, and would not know what to say; and, when brought to trial, however contemptible and weak your accuser might be, if he chose to indict you capitally, you would perish. Can this be wisdom, which, if it takes hold of a gifted man, destroys the excellence of his nature, rendering him incapable of preserving himself and others from the greatest dangers, enabling his enemies to plunder him of all his property, and reducing him to the situation of those who, by a sentence of the Court, have been deprived of all their rights?'

If it be admitted that Sergeant Talfourd's instruction in forensic oratory would not be immoral, however unusual, we have only to extend the sphere and include politics, and represent to ourselves the democratic state of Athens, where

demagogues were ever on the alert, and we shall be fully persuaded that the art of the Sophists was not considered immoral; and, as further proof, we select a passage in Plato's *Republic*, an unexceptionable source.

Socrates, speaking of the mercenary teachers whom the people called Sophists, says:—'These Sophists teach them only the *things which the people themselves profess in assemblies*: yet this they call wisdom. It is as if a man had observed the instincts and appetites of a great and powerful beast, in what manner to approach it, how or why it is ferocious or calm, what cries it makes, what tones appease and what tones irritate it; after having learnt all this, and calling it wisdom, commenced teaching it without any knowledge of what is good, just, shameful and unjust among these instincts and appetites; but calling that good which flatters the animal, and that bad which irritates it; because he knows not the difference between what is good in itself and that which is only relatively good.*

There is the usual vein of caricature in this description (which is paraphrased in the *Quarterly Review*,† and there given as if the undoubted and unexaggerated doctrines of the Sophists); but it very distinctly sets forth the fact that the Sophists did not teach anything contrary to public morals, however their art may have offended austere teachers. Indeed the very fact of their popularity would prove that they did but respond to a public want; and because they responded to this want they were paid by the public in money. Plato constantly harps upon their being mercenaries; but he was wealthy, and could afford such sarcasms. The Greeks paid their Musicians, Painters, Sculptors, Physicians, Poets, and Teachers in Schools; why therefore should they not pay their Philosophers? Zeno of Elea was paid; so was Democritus; it is true that both of these have been sometimes included amongst the Sophists. We see nothing more derogatory in the acceptance of money

* PLATO, *Rep.* vi. 291.

† No. xlii. p. 288

by Philosophers than by Poets; and we know how the latter stipulated for handsome payment.

Having done our best to show that the 'Sophistical art'—that alone which the Sophists had in common—was not immoral, or at any rate was not regarded as immoral by the Greeks, we will now see how the case stands with respect to the old accusation of their having corrupted the Athenian youth, and of their doctrines being essentially corrupting.

That the Athenians did not consider the Sophists as corruptors of youth is unequivocally shown in two facts: they did not impeach the Sophists, and they *did* impeach Socrates. When Anaxagoras the philosopher, and Protagoras the Sophist, 'sapped the foundations of morality' by expressing opinions contrary to the religion of Athens, they were banished; but who impeached Gorgias, or Hippias, or Prodicus?

The art however may have been essentially corrupting, although to contemporaries it did not appear so. We believe it was so, if it is to be made responsible for all the consequences which can logically be deduced from it. But 'logical consequences' are unjust standards. Men are not responsible for what others may consider their doctrines 'lead to.' It was on the ground of such remote deduction that Socrates was put to death; and on such ground the Sophists have been the byword of reproach. Mr. Grote grapples directly with the fact where he declares Athens at the close of the Peloponnesian war was not more corrupt than Athens in the days of Miltiades and Aristides; and had it been more corrupt, we should demand quite other evidence than that usually alleged, before believing the corruption due to the Sophists.

Why then did Plato speak of the Sophists with so much asperity? Why did he consider their teaching so dangerous? Because he differed from them *in toto*. He hated them for the same reason that Calvin hated Servetus; but having a more generous nature than Calvin, his hatred of their doctrines did not assume so disgraceful a form. If his

allegations are to condemn the Sophists, they must equally condemn all the public men of that day. 'Whoever will read either the *Gorgias* or the *Republic*, will see in how sweeping and indiscriminate a manner he passes the sentence of condemnation. Not only the Sophists and all the Rhetors, but all the Musicians and either Dithyrambic or Tragic Poets, all the Statesmen past as well as present, not excepting even the great Pericles, receive from his hand one common stamp of dishonour.* But so far is he from considering the Sophists as peculiar corruptors of Athenian morality 'that he distinctly protests against that supposition in a remarkable passage of the *Republic*. It is, he says, the whole people or the society, with its established morality, intelligence, and tone of sentiment, which is intrinsically vicious; the teachers of such a society must be vicious also, otherwise their teaching would not be received; and even if their private teaching were ever so good, its effect would be washed away, except in some few privileged natures, by overwhelming influences.†

The truth is that, in as far as the Sophists taught any doctrine at all, their doctrine was ethical; and to suppose men teaching immoral ethics, *i. e.* systems of morality known by them to be immoral, is absurd. To clear up this point we must endeavour to ascertain what that doctrine was.

Plato's account is on the face of it a caricature, since it is impossible that any man should have seriously entertained such a doctrine. What Protagoras and Gorgias thought is not given, but only a misrepresentation of what they thought. Plato seizes hold of one of their doctrines, and, interpreting it in his own way, makes it lead to the most outrageous absurdity and immorality. This is as if Berkeley's doctrine had been transmitted to us by Beattie. Berkeley, it is well known, denied the existence of the external world, resolving it into a simple world of ideas. Beattie taunted him with not having followed out his principles, and with not having walked over

* GROTE, viii. 537.

† *Ibid.*, p. 59. The passage referred to is *Repub.* vi. 492 (page 388, ed. Bekker), and the Sophists are mentioned by name as the teachers of whom it treats.

a precipice. This was a gross misrepresentation: an *ignoratio elenchi*; Beattie misunderstood the argument, and drew conclusions from his misunderstanding. Now, suppose him to have written a dialogue on the plan of those of Plato: suppose him making Berkeley expound his argument in the way he (Beattie) interpreted it, with a flavour of exaggeration for the sake of effect, and of absurdity for the sake of easy refutation: how would he have made Berkeley speak? Somewhat thus:—‘Yes, I maintain that there is no such external existence as that which men vulgarly believe in. There is no world of matter, but only a world of ideas. If I were to walk over a precipice, I should receive no injury: it is only an ideal precipice.’

This is the interpretation of a Beattie; how true it is most men know: it is, however, quite as true as Plato’s interpretation of the Sophists. From Berkeley’s works we can convict Beattie. Plato we can convict from experience of human nature: experience tells us that no man, far less any set of men, could seriously, publicly, and constantly broach doctrines thought to be subversive of all morality, without incurring the heaviest penalties. To broach immoral doctrines with the faintest prospect of success, a man must do so in the name of rigid morality. To teach immorality, and openly to avow that it is immoral, was, according to Plato, the office of the Sophists;* a statement which carries with it its own contradiction.

§ II. PROTAGORAS.

Nothing can be more erroneous than to isolate the Sophists from previous teachers, as if they were no direct product of the speculative efforts which preceded them. They illustrate the crisis at which philosophy had arrived. They took the *negative*, as Socrates took the *positive* issue out of the dilemma.

Protagoras, the first who is said to have avowed himself a

* This passage in the *Protagoras* is often referred to as a proof of the shamelessness of the Sophists, and sometimes of the ill-favour with which they were regarded. It is only a proof of Plato’s tendency to caricature.

Sophist, was born at Abdera, where Democritus first noticed him as a porter, who showed great address in inventing the knot.* The consequence was that Democritus gave him instructions in Philosophy. The story is apocryphal, but indicates a connection to have existed between the speculations of the two thinkers. Let us suppose Protagoras to have accepted the doctrine of Democritus; with him to have rejected the unity of the Eleatics and to have maintained the existence of the Many. From Democritus he would also learn that thought is sensation, and that all knowledge is therefore phenomenal. There were two theories in the Democritean system which he could not accept, viz. the *Atomic* and *Reflective*. These two imply each other. Reflection is necessary for the idea of Atoms; and it is from the idea of Atoms not perceived by the sense, that the existence of Reflection is proved. Protagoras rejected the Atoms, and would therefore reject Reflection. He said that Thought was Sensation, and all knowledge consequently individual.

Did not the place of his birth no less than the traditional story lead one to suppose some connection with Democritus, we might feel authorized to adopt certain expressions of Plato, and consider Protagoras to have derived his doctrine from Heraclitus. He certainly resembles the last-named in the main results to which his speculations led him. Be that as it may, the fact is unquestionable, that he maintained the doctrine of Thought being identical with and limited to Sensation. Now, this doctrine implies that everything is true *relatively*—every sensation is a true sensation; and, as there is nothing but sensation, knowledge is inevitably fleeting and imperfect. In a melancholy mind, as in that of Heraclitus, such a doctrine would deepen sadness, till it produced despair. In minds of greater elasticity, in men of greater confidence, such a doctrine would lead to an energetic scepticism.

* What the precise signification of *τέλη* is we are unable to say. A porter’s knot, such as is now used, is the common interpretation. Perhaps Protagoras had contrived a sort of wooden machine such as the glaziers use, and which is used by the porters in Greece and Italy to this day.

In Protagoras it became the formula: 'Man is the measure of all things.'

Sextus Empiricus gives the psychological doctrine of Protagoras very explicitly; and his account may be received without suspicion. We translate a portion of it:—

'Matter, says Protagoras, is in a perpetual flux;* whilst it undergoes augmentations and losses, the senses also are modified, according to the age and disposition of the body. He said, also, that the reasons of all phenomena (appearances) resided in matter as *substrata* (τοὺς λόγους πάντων τῶν φαινομένων ὑποκείσθαι ἐν τῇ ὕλῃ); so that matter, in itself, might be whatever it appeared to each. But men have different perceptions at different times, according to the changes in the thing perceived. Whoever is in a healthy state perceives things such as they appear to all others in a healthy state, and *vice versa*. A similar course holds with respect to different ages, as well as in sleeping and waking. Man is therefore the criterion of that which exists; all that is perceived by him exists, that which is perceived by no man does not exist.'†

This statement of the important philosophical truth, the Relativity of Human Knowledge, which seems first to have found its distinct formula in Protagoras, although the current of speculation had long been tending that way, is historically remarkable. We cannot ascertain in how far Protagoras had mastered its intellectual significance, that is, its psychological foundation and its sceptical reach; but we know that he had mastered its practical significance, that is the instigation to cease philosophical speculation, and seek only effective agreement among men.

Whether Protagoras or any other of the Sophists clearly saw all that acute metaphysicians have since seen in his formula, may be doubted. But there is no doubt that his formula was one which forcibly directed men's attention to the

* Τὴν ὕλην βευστὴν εἶναι, an expression which, if not borrowed by SEXTUS from PLATO, would confirm the conjecture above respecting Heraclitus, as the source of Protagoras's system.

† SEXTUS EMPIRICUS: *Hypot. Pyrrhon*. Paris 1621, p. 44.

cardinal question of all philosophizing. Plato and Aristotle both attempted a refutation of the formula, both attempted to construct some Criterion or standard of truth. They failed, I think; but only on the assumption of their having succeeded could philosophy have been continued.

The formula marks a crisis. It announced the vanity of philosophizing. But Protagoras was not satisfied with this purely negative result. If philosophy was to be abjured, something must take its place. Scepticism could not suffice for energetic souls.

The difference between the Sophists and the Sceptics was this: they were both convinced of the insufficiency of all knowledge, but the Sceptics contented themselves with the conviction, while the Sophists, satisfied with the vanity of all endeavour to penetrate the mysteries of the universe, began to consider their relations to other men: they devoted themselves to politics and rhetoric.* If there was no possibility of Truth, there only remained the possibility of Persuasion. If one opinion were as true as another,—that is, if neither were true,—it was nevertheless desirable, for the sake of Society, that certain opinions should prevail; and, if Logic was powerless, Rhetoric was efficient. Hence Protagoras is made to say, by Plato, that the wise man is the physician of the soul: he cannot indeed induce truer thoughts into the mind, since all thoughts are equally true; but he can induce healthier and more profitable thoughts. He can in the same way heal Society, since by the power of oratory he can introduce good useful sentiments in the place of those base and hurtful.†

This doctrine may be false; but is it not a natural consequence of the philosophy of the epoch? It may be immoral; but is it necessarily the bold and shameless immorality attributed to the Sophists? To us it appears to be neither more nor less than the result of a sense of the radical insufficiency of knowledge. Protagoras had spent his youth

* See PLATO's definition of the sophistical art, *Sophista*, p. 146.

† *Theætetus*, p. 228.

in the study of philosophy; he had found that study vain and idle; he had utterly rejected it, and had turned his attention elsewhere. A man of practical tendencies, he wanted a practical result. Failing in this, he sought another path, firmly impressed with the necessity of having something more definite wherewith to enter the world of action. Plato could see no nobler end in life than that of contemplating Being,—than that of familiarizing the mind with the eternal Good, the Just, and the Beautiful,—of which all goodness, justice, and beautiful things were the images. With such a view of life it was natural that he should despise the scepticism of the Sophists. This scepticism is clearly set forth in the following passage from the speech of Callicles, in Plato's *Gorgias*:—‘Philosophy is a graceful thing when it is moderately cultivated in youth; but, if any one occupies himself with it beyond the proper age, it ruins him; for, however great may be his natural capacity, if he philosophizes too long he must of necessity be inexperienced in all those things which one who would be great and eminent must be experienced in. He must be unacquainted with the laws of his country, and with the mode of influencing other men in the intercourse of life, whether private or public, and with the pleasures and passions of men; in short, with human characters and manners. And when such men are called upon to act, whether on a private or public occasion, they expose themselves to ridicule, just as politicians do when they come to your conversation, and attempt to cope with you in argument; for every man, as Euripides says, occupies himself with that in which he finds himself superior; that in which he is inferior he avoids, and speaks ill of it, but praises what he excels in, thinking that in doing so he is praising himself. The best thing, in my opinion, is to partake of both. It is good to partake of philosophy by way of education, and it is not ungraceful in a young man to philosophize. But, if he continues to do so when he grows older, he becomes ridiculous, and I feel towards him as I should towards a grown person who lisped and played at childish plays. When I see an old man still

continuing to philosophize, I think he deserves to be flogged. However great his natural talents, he is under the necessity of avoiding the assembly and public places, where, as the poet says, men become eminent, and to hide himself, and to pass his life whispering to two or three striplings in a corner, but never speaking out anything great, and bold, and liberal.’

That Protagoras, no less than Prodicus,* was a teacher of excellent morality, if not of the highest abstract views of the Good, is clearly made out not only in Mr. Grote's work, but in that of Zeller, where the Sophists are unfavourably treated on the whole,† and is indeed supported by the testimony of Plato and Xenophon. The ethics of the Sophists may not have been of a very lofty kind, but they were considered, even by enemies, to be adapted to the exigencies of the day. They doubted the possibility of Philosophy; they were assured only of the advantage of Oratory. In their visits to various cities they could not fail to remark the variety of laws and ordinances in the different States. This variety impressed them with a conviction that there were no such things as Right and Wrong by nature, but only by convention. This, therefore, became a fundamental precept with them. It was but a corollary of their dogma respecting Truth. For man there was no Eternal Right because there was no Eternal Truth; τὸ δίκαιον καὶ τὸ αἰσχρὸν οὐ φύσει ἀλλὰ νόμῳ: law was but the law of each city. ‘That which appears just and honourable to each city, is so for that city, as long as the opinion is entertained,’ says Protagoras in the *Theætetus* (p. 229).

This denial of abstract Truth and abstract Justice is easily

* Prodicus is specially excepted by ARISTOPHANES in his sweeping condemnation of the Sophists; and indeed the author of the well-known parable, *The Choice of Hercules*, must command the respect even of antagonists.

† ZELLER: *Philos. der Griechen*, i. 775. In one of his notes, ZELLER alludes to STEINHART's doubt respecting the authorship of the Myth, attributed by PLATO to Protagoras, as being ‘quite worthy of Plato himself.’ This is very characteristic of the ordinary tone of commentators, and we may well ask with ZELLER, ‘Aber warum soll er für Protagoras zu gut seyn?’

pushed to absurd and immoral consequences; but we have no evidence that such consequences were maintained by the Sophists. Plato often judges them by such consequences; but independently of the want of any confidence in his representations as faithful, we can often detect in Plato himself evidences of the exaggeration of his general statements. Thus, he on various occasions makes the Sophists maintain that Might is Right. Moderns, who always accept him as positive testimony, have therefore unanimously repeated this statement. Yet, it is obvious that they could not have held this opinion except in a very qualified form. And, in the first Book of the *Republic*, Thrasymachus the Sophist is made to explain his meaning: namely, that Justice is the law ordained by the party which is strongest in the State. Thus, in a democracy the enactments of the people are the laws: these laws are for their advantage: therefore just. Now, in this admission, by Plato, of a qualification of the abstract formula, 'Might is Right,' we see evidence of that formula never having been promulgated by the Sophists; it was only an interpretation by Plato. What they meant was this: All law is but convention: the convention of each State is therefore just *for it*; and, inasmuch as any such convention must necessarily be ordained by the strongest party, *i.e.* must be the will of the many, so we may see that justice is but the advantage of the strongest.

The foregoing will, we trust, suffice to show that the tenets attributed to them by Plato, are often caricatures, and admit of very different explanation. Well might Gorgias exclaim, on reading the Dialogue which bears his name, 'I did not recognise myself. The young man, however, has great talent for satire.'

The Sophists were the natural production of the opinions of the epoch. In them we see the first energetic protest against the possibility of metaphysical science. This protest however must not be confounded with the protest of Bacon—must not be mistaken for the germ of positive philosophy. It was the protest of baffled minds. The philosophy of the

day led to scepticism; but with scepticism no energetic man could remain contented. Philosophy was therefore denounced, not because a surer, safer path of inquiry had been discovered, but because philosophy was found to lead nowhither. The scepticism of the Sophists was a scepticism, with which no great speculative intellect could be contented. Accordingly with Socrates philosophy again re-asserted her empire.

FOURTH EPOCH.

Philosophy emerges from the crisis by a new development of Method—the application of Dialectics as a negative process preparatory to the positive foundation of Inductive inquiry.

—♦—
SOCRATES.

§ I. THE LIFE OF SOCRATES.

WHILST the brilliant Sophists were gaining money and renown by protesting against Philosophy, and, accepting as the basis of all arguments the ideas generally prevalent on great topics, taught the arts of persuasion as the only practical outcome of philosophy, there suddenly appeared amongst them a strange antagonist. The picture he presents in an ordinary mind is a perfect contrast to them. They had slighted Truth; they had denied her. He had made her his mistress; and, with patient labour, with untiring energy, did his large wise soul toil after perfect communion with her. They had deserted Truth for money and renown. He had remained constant to her in poverty. They professed to teach everything. He only knew that he knew nothing; and denied that anything could be taught. Yet he believed he could be of service to his fellow-men; not by teaching, but by helping them to learn. His mission was to examine the thoughts of others. This he humorously explained by reference to his mother's profession, namely that of a midwife. What she did for women in labour he could do for men

pregnant with ideas. He was an accoucheur of ideas. He assisted ideas in their birth, and, having brought them into light, he examined them, to see if they were fit to live: if true, they were welcomed; if false, destroyed. And for this assistance he demanded no pecuniary recompense, but steadfastly refused every bribe of the kind.

He was the declared questioner of all men who were renowned for wisdom, or any intellectual eminence; and they were somewhat puzzled by their questioner. Who is he?—Socrates, the son of Sophroniscus. What does he?—Converse. For what purpose?—To expose error. Simply that?—That and no more. Has he no truth to put in the place of error?—None; except the truth that man is ignorant and fancies himself wise.

Some gorgeous Sophists, in their flowing robes, followed by crowds of eager listeners, treated the poor and humbly-clad Socrates with ineffable contempt. He was rude and ungainly in his movements; unlike all respectable citizens in his habits. Barefoot, he wandered about the streets of Athens absorbed in thought; sometimes he stood still for hours, fixed in meditation. Every day he strolled into the marketplace, and disputed with all who were willing. In appearance he resembled a Silenus. His flattened nose, with wide and upturned nostrils, his projecting eyeballs, his thick and sensual lips, his squab figure and unwieldy belly, were all points upon which ridicule might fasten. Yet when this Silenus spoke there was a witchery in his tongue which fascinated those whom his appearance had disgusted; and Alcibiades declared that he was forced to stop his ears and flee away, that he might not sit down beside Socrates and 'grow old in listening to his talk.' Let us hear Alcibiades describe him.*

'I will begin the praise of Socrates by comparing him to a certain statue. Perhaps he will think that this statue is introduced for the sake of ridicule; but I assure you that it is necessary for the illustration of truth. I assert then, that

* PLATO: *Symposium*, SHELLEY'S translation.

Socrates is exactly like those Silenuses that sit in the sculptors' shops, and which are carved holding flutes or pipes, but which, when divided in two, are found to contain within-side the images of the gods. I assert that Socrates is like the Satyr Marsyas; that your form and appearance are like these Satyrs, I think that even you will not venture to deny; and how like you are to them in all other things, now hear. Are you not scornful and petulant? If you deny this, I will bring witnesses. Are you not a piper, and far more wonderful a one than he? for Marsyas, and whoever now pipes the music that he taught, that music which is of heaven, and described as being taught by Marsyas, enchants men through the power of the mouth; for, if any musician, be he skilful or not, awakens this music, it alone enables him to retain the minds of men, and from the divinity of its nature makes evident those who are in want of the Gods and initiation. You differ only from Marsyas in this circumstance, that you effect without instruments, by mere words, all that he can do; for, when we hear Pericles, or any other accomplished orator, deliver a discourse, no one, as it were, cares anything about it. But when anyone hears you, or even your words related by another, though ever so rude and unskilful a speaker, be that person a woman, man, or child, we are struck and retained, as it were, by the discourse clinging to our minds.

'If I was not afraid that I am a great deal too drunk, I would confirm to you by an oath the strange effects which I assure you I have suffered from his words, and suffer still; for, when I hear him speak, my heart leaps up far more than the hearts of those who celebrate the Corybantic Mysteries; my tears are poured out as he talks—a thing I have seen happen to many others beside myself. I have heard Pericles and other excellent orators, and have been pleased with their discourses, but I suffered nothing of this kind; nor was my soul ever on those occasions disturbed and filled with self-reproach, as if it were slavishly laid prostrate. But this Marsyas here has often affected me in the way I describe,

until the life which I lead seemed hardly worth living. Do not deny it, Socrates; for I well know that if even now I chose to listen to you, I could not resist, but should again suffer the same effects; for, my friends, he forces me to confess, that while I myself am still in want of many things, I neglect my own necessities, and attend to those of the Athenians. I stop my ears, therefore, as from the Sirens, and flee away as fast as possible, that I may not sit down beside him and grow old in listening to his talk; for this man has reduced me to feel the sentiment of shame, which I imagine no one would readily believe was in me; he alone inspires me with remorse and awe; for I feel in his presence my incapacity of refuting what he says, or of refusing to do that which he directs; but, when I depart from him, the glory which the multitude confers overwhelms me. I escape, therefore, and hide myself from him, and when I see him I am overwhelmed with humiliation, because I have neglected to do what I have confessed to him ought to be done; and often and often have I wished that he were no longer to be seen among men. But, if that were to happen, I well know that I should suffer far greater pain; so that where I can turn, or what I can do with this man, I know not. All this have I and many others suffered from the pipings of this Satyr.

'And observe how like he is to what I said, and what a wonderful power he possesses. I know that there is not one of you who is aware of the real nature of Socrates; but since I have begun, I will make him plain to you. You observe how passionately Socrates affects the intimacy of those who are beautiful, and how ignorant he professes himself to be; appearances in themselves excessively Silenic. This, my friends, is the external form with which, like one of the sculptured Sileni, he has clothed himself; for, if you open him, you will find within admirable temperance and wisdom: for he cares not for mere beauty, but despises more than any one can imagine all external possessions, whether it be beauty, or wealth, or glory, or any other thing for which the

multitude felicitates the possessor. He esteems these things, and us who honour them, as nothing, and lives among men, making all the objects of their admiration the playthings of his irony. But I know not if any one of you have ever seen the divine images which are within, when he has been opened and is serious. I have seen them, and they are so supremely beautiful, so golden, so divine and wonderful, that everything which Socrates commands surely ought to be obeyed, even like the voice of a God.

‘Many other and most wonderful qualities might well be praised in Socrates, but such as these might singly be attributed to others. But that which is unparalleled in Socrates, is, that he is unlike, and above comparison with, all other men, whether those who have lived in ancient times, or those who exist now; for, it may be conjectured, that Brasidas and many others are such as was Achilles. Pericles deserves comparison with Nestor and Antenor; and other excellent persons of various times may, with probability, be drawn into comparison with each other. But to such a singular man as this, both himself and his discourses are so uncommon, no one, should he seek, would find a parallel among the present or the past generations of mankind; unless they should say that he resembled those with whom I lately compared him; for, assuredly, he and his discourses are like nothing but the Sileni and the Satyrs. At first I forgot to make you observe how like his discourses are to those Satyrs when they are opened; for, if any one will listen to the talk of Socrates, it will appear to him at first extremely ridiculous; the phrases and expressions which he employs fold around his exterior the skin, as it were, of a rude and wanton Satyr. He is always talking about brass-founders, and leather-cutters, and skin-dressers: and this is his perpetual custom, so that any dull and unobservant person might easily laugh at his discourse. But if any one should see it opened, as it were, and get within the sense of his words, he would then find that they alone of all that enters into the mind of man to utter, had a profound and persuasive meaning, and that they

were most divine; and that they presented to the mind innumerable images of every excellence, and that they tended towards objects of the highest moment, or rather towards all that he who seeks the possession of what is supremely beautiful and good need regard as essential to the accomplishment of his ambition.

‘These are the things, my friends, for which I praise Socrates.’

Such a Silenus was the most formidable antagonist that the Sophists had encountered; but this is small praise for him who was hereafter to become one who was to give a new impulse to the human mind, and leave as an inheritance to mankind the grand example of an heroic life devoted to truth and crowned with martyrdom.

Everything about Socrates is remarkable,—personal appearance, moral physiognomy, position, object, method, life and death. Fortunately, his character and his tendencies have been so clearly pictured in the works of Plato and Xenophon, that although the portrait may be flattered we are sure of its general truth.

He was born B.C. 469, the son of Sophroniscus, a sculptor,* and Phænarete, a midwife. His parents, though poor, managed, it is said, to give him the ordinary education. Besides which, he learned his father’s art; whether he made any progress in it we are unable to say; probably not, as he relinquished it early. A group of Graces, which tradition attributed to the chisel of Socrates, was exhibited for centuries among the art treasures of the Acropolis; but we have of course no means of determining the authenticity of the relic. Diogenes Laertius tells us that Crito, a wealthy Athenian, charmed with the manners of Socrates, is said to have withdrawn him from the shop, and to have educated

* WIGGERS (*Life of Socrates*, trans.) says, that Timon the Sillograph calls Socrates, with a sneer, λιθοῦδος, ‘a stone-scraper.’ He forgets that λιθοῦδος was one of the names for a sculptor, as LUCIAN informs us in the account of his early life.

him. This Crito afterwards became a reverential disciple of the great genius he had discovered.

Considering that we have his own assertion as evidence of his having early studied Physics, for which he had an astonishing longing, and considering further that he so entirely relinquished that study, even declaring it to be impious,* it is of little importance to discuss, with German critics, whether he did or did not learn from Archelaus and Anaxagoras. That he learned oratory from Prodicus† is not discountenanced by the passage in Xenophon,‡ where he is made to say, 'You despise me because you have squandered money upon Protagoras, Gorgias, Prodicus, and so many others, in return for their teaching; whereas I am forced to draw my philosophy from my own brain;' for certainly, if any one can claim originality, it is Socrates: his philosophy he learned from no one. He struck into a new path. Instead of trying to account for the existence of the universe, he was ever craving, as Mr. Maurice well says, for a light to show him his own path through it.§

He did not commence teaching till about the middle of his career. We have but few records of the events which filled up the period between his first leaving his father and his first teaching. One of these was his marriage with Xanthippe. She bore him three children. The violence of her temper and the equanimity with which he submitted to it are proverbial. She has become a type; her name is synonymous with Shrew. He gave a playful explanation of his choice by remarking, that 'those who wish to become skilled in horsemanship select the most spirited horses; after being able to bridle those, they believe they can bridle all others. Now, as it is my wish to live and converse with men, I married this woman, being firmly convinced that in case I should be unable to endure her, I should be able to endure all others.'||

* In XENOPHON, 'madness.'—*Memorab.*, lib. i. c. 1.

† PLATO, *Meno*, p. 96.

‡ *Convivium*, i. 5.

§ MAURICE: *Moral and Metaphysical Philosophy*, i. 113.

|| XENOPHON, *Convivium*, ii.

Before he gave himself up to teaching, he performed military service in three battles, and distinguished himself in each. In the first, the prize of bravery was awarded to him. He relinquished his claim in favour of Alcibiades, whom it might encourage to deserve such honour. Various anecdotes are related of him during his campaigns. In spite of the severity of winter, when the ice and snow were thick upon the ground, he went barefoot and lightly clad. On one occasion he stood before the camp for four-and-twenty hours on the same spot rapt in meditation. Plato has given us a beautiful description of Socrates during the campaign, which we quote in the translation by Shelley:—

'At one time we were fellow-soldiers, and had our mess together in the camp before Potidæa. Socrates, there overcame not only me, but every one besides, in endurance of toils: when, as happens in a campaign, we were reduced to few provisions, there were none who could sustain hunger like Socrates: and, when we had plenty, he alone seemed to enjoy our military fare. He never drank much willingly; but, when he was compelled he conquered all even in that to which he was least accustomed, and, what is most astonishing, no person ever saw Socrates drunk either then or at any other time. In the depth of winter (and the winters there are excessively rigid) he sustained calmly incredible hardships: and, amongst other things, whilst the frost was intolerably severe, and no one went out of their tents, or, if they went out, wrapt themselves up carefully and put fleeces under their feet, and bound their legs with hairy skins, Socrates went out only with the same cloak on that he usually wore, and walked barefoot upon the ice, more easily indeed than those who had sandalled themselves so delicately; so that the soldiers thought he did it to mock their want of fortitude. It would indeed be worth while to commemorate all that this brave man did and endured in that expedition.

'In one instance he was seen early in the morning standing in one place rapt in meditation, and, as he seemed not to be able to unravel the subject of his thoughts, he still

continued to stand as inquiring and discussing within himself; and, when noon came, the soldiers observed him, and said to one another, "Socrates has been standing there thinking, ever since the morning." At last some Ionians came to the spot, and having supped, as it was summer, bringing their blankets, they lay down to sleep in the cool: they observed that Socrates continued to stand there the whole night until morning, and that, when the sun rose, he saluted it with a prayer, and departed.

'I ought not to omit what Socrates is in battle; for, in that battle after which the Generals decreed to me the prize of courage, Socrates alone of all men was the saviour of my life, standing by me when I had fallen and was wounded, and preserving both myself and my arms from the hands of the enemy. On that occasion I entreated the Generals to decree the prize, as it was most due, to him. And this, O Socrates, you cannot deny, that when the Generals, wishing to conciliate a person of my rank, desired to give me the prize, you were far more earnestly desirous than the Generals, that this glory should be attributed, not to yourself, but me.

'But to see Socrates when our army was defeated and scattered in flight at Delium, was a spectacle worthy to behold. On that occasion I was among the cavalry, and he on foot, heavily armed. After the total rout of our troops, he and Laches retreated together: I came up by chance, and, seeing them, bade them be of good cheer, for that I would not leave them. As I was on horseback, and therefore less occupied by a regard of my own situation, I could better observe, than at Potidæa, the beautiful spectacle exhibited by Socrates on this emergency. How superior was he to Laches in presence of mind and courage! Your representation of him on the stage, O Aristophanes, was not wholly unlike his real self on this occasion; for he walked and darted his regards around with a majestic composure, looking tranquilly both on his friends and enemies; so that it was evident to everyone, even from afar, that whoever should venture to attack

him would encounter a desperate resistance. He and his companion thus departed in safety; for those who are scattered in flight are pursued and killed, whilst men hesitate to touch those who exhibit such a countenance as that of Socrates even in defeat.'

We must cast a glance at his public career. His doctrine being ethical, there is great importance in seeing how far it was practical. He proclaimed the supremacy of Virtue over all other rules of life; he exhorted men to a brave and unflinching adhesion to Justice, as the only real happiness; he declared that the unjust alone are unhappy. Was he himself virtuous? was he happy?

His bravery as a soldier was surpassed by his bravery as a senator. He had that high moral courage which can brave not only death, but the opinion of the world. He presents an example, almost unique in history, of a man who could defy a tyrant, and also defy a tyrannical mob, an impetuous, imperious mob. The Thirty Tyrants on one occasion summoned him, together with four others, to the Tholus, the place in which the Prytanes took their meals. He was there commanded to bring Leon of Salamis to Athens. Leon had obtained the right of Athenian citizenship, but, fearing the rapacity of the tyrants, had retired to Salamis. To bring back Leon, Socrates steadily refused. He says himself, that the 'Government, although it was so powerful, did not frighten me into doing anything unjust; but, when we came out of the Tholus, the four went to Salamis and took Leon, but I went away home. And perhaps I should have suffered death on account of this, if the Government had not soon been broken up.'

On another occasion he braved the clamorous mob. He was then a Senator, the only State office he ever held. The Athenian Senate consisted of the Five Hundred who were elected from the ten tribes. During a period of thirty-five or thirty-six days the members of each tribe in turn had the presidency, and were called Prytanes. Of the fifty Prytanes, ten had the presidency every seven days; each day one of

these ten enjoyed the highest dignity, with the name of Epistates. He laid everything before the assembly of the people, put the question to the vote, examined the votes, and, in short, conducted the whole business of the assembly. He enjoyed this power, however, only for a single day; for that day he was entrusted with the keys of the citadel and the treasury of the republic.

Socrates was Epistates on the day when the unjust sentence was to be passed on the Admirals who had neglected to bury the dead after the battle of Arginusæ. To take care of the burial of the dead was a sacred duty.* The shades of the unburied were believed to wander restlessly for a hundred years on the banks of the Styx. After the battle of Arginusæ, a violent storm arose, which prevented the Admirals from obtaining the bodies of the slain. In order to remedy this, they left behind them some inferior officers (Taxiarchs) to attend to the office. But the violence of the storm rendered it impossible. The Admirals were tried. They produced the evidence of pilots to show that the tempest had rendered the burial impracticable; besides which, they had left the Taxiarchs behind, so that the blame, if any, ought to fall on the latter. This produced its natural effect on the people, who would instantly have given an acquittal, had the question been put to the vote. But the accusers managed to adjourn the assembly, pretending that it was too dark to count the show of hands. In the meanwhile the enemies of the Admirals did all they could to inflame the minds of the people. The lamentations and mournful appearance of the kinsmen of the slain, who had been hired for the tragic scene, had a powerful influence on the assembly. The votes were to be given on the general question, whether the Admirals had done wrong in not taking up the bodies of the dead; and, if they should be condemned by the majority (so the Senate ordained), they were to be put to death and their property confiscated. But to condemn all by one vote was contrary to law. The Prytanes, with Socrates at their head,

* The *Antigone* of Sophocles is founded on the sacredness of this duty.

refused to put the illegal question to the vote. The people became furious, and loudly demanded that those who resisted their pleasure should themselves be brought to trial. The Prytanes wavered, yielded. Socrates alone remained firm, defying the threats of the mob. He stood there to administer justice. He would not administer injustice. In consequence of his refusal, the question could not be put to the vote, and the assembly was again adjourned. The next day a new Epistates and other presidents succeeded, and the Admirals were condemned.*

It was impossible for Socrates to enter the market-place without at once becoming an object of attention. His ungainly figure, his strange character, and his bewitching tongue, excited and enchained curiosity. He became known to every citizen. Who had not listened to him? Who had not enjoyed his inimitable irony? Who had not seen him demolish the arrogance and pretension of some reputed wise man? Socrates must have been a terrible antagonist to all people who believed that they were wise because they could discourse fluently; and these were not few. He always declared that he knew nothing. When a man professed knowledge on any point, especially if admiring crowds gave testimony to that profession, Socrates was sure to step up to him, and, professing ignorance, entreat to be taught. Charmed with so humble a listener, the teacher began. Interrogated, he unsuspectingly assented to some very evident proposition; a conclusion from that, almost as evident, next received his assent; from that moment he was lost. With great power of logic, with much ingenious subtlety, and sometimes with daring sophistication, a web was formed from which he could not extricate himself. His own admissions were proved to lead to monstrous conclusions; these conclusions he repugned, but could not see where the gist of his error lay. The laughter of all bystanders bespoke his defeat. Before him was his adversary, imperturbably calm, apparently innocent of all attempt at making him ridiculous. Confused, but not

* WIGGERS, pp. 51-55.

confuted, he left the spot indignant with himself, but more indignant with the subtlety of his adversary.

It was thus that Socrates became mistaken for a Sophist; but he was distinguished from the Sophists by his constant object. Whilst they denied the possibility of truth, he only sought to make men aware of their ignorance, in the ironical, playful, and, sometimes, quibbling manner in which he destroyed their arguments.

This sort of disputation daily occurred in Athens; and by it, doubtless, Socrates acquired that notoriety which induced Aristophanes to select him as the Sophist hero of the comedy of *The Clouds*. It cannot be doubted that to his adversaries he must have been an exasperating opponent. No one was safe from his attack. No one who presumed to know anything could escape him. In confirmation, let us quote the account Socrates gives of his procedure, as reported by Plato in the *Apology*. Socrates there describes his sensations on hearing that Apollo had declared him to be the wisest of men. He could not understand this. Knowing himself to be wise in nothing, yet not daring to think the words of the god could be false, he was puzzled. 'I went to one of those who are esteemed to be wise, thinking that here, if anywhere, I should prove the oracle to be wrong, and to be able to say, "Here is a man wiser than I." After examining this man (I need not name him, but he was one of the politicians), and conversing with him, it was my opinion that this man *seemed* to many others, and especially to himself, to be wise, but *was* not so. Thereupon I tried to convince him that he thought himself wise, but was not. By this means I offended him and many of the bystanders. When I went away, I said to myself, "I am wiser than this man; for neither of us, it would seem, knows anything valuable: but he, not knowing, fancies he does know; I, as I really do not know, so I do not think I know. I seem, therefore, to be in one small matter wiser than he." After this I went to another still wiser than he, and came to the same result; and by this I affronted him too, and many others. I went on in the same manner, perceiving

with sorrow and fear that I was making enemies; but it seemed necessary to postpone all other considerations to the service of the god, and therefore to seek for the meaning of the oracle by going to all who appeared to know anything. And, O Athenians, the impression made on me was this: The persons of most reputation seemed to me nearly the most deficient of all; other persons of much smaller account seemed much more rational.

'When I had done with the politicians, I went to the poets, tragic, dithyrambic, and others, thinking that I should surely find myself less knowing than they. Taking up those of their poems which appeared to me most laboured, I asked them (that I might at the same time learn something from them) what these poems meant? I am ashamed, O Athenians, to say the truth, but I must say it; there was scarcely a person present who could not have spoken better concerning their poems than they. I soon found that what poets do, they accomplish not by wisdom, but by a kind of natural turn, and an enthusiasm like that of prophets and those who utter oracles; for these, too, speak many fine things, but do not know one particle of what they speak.

'Lastly, I resorted to artificers; for I was conscious that I myself knew, in a manner, nothing at all, but should find them knowing many valuable things. And in this I was not mistaken; they knew things which I knew not, and were, so far, wiser than I. But they appeared to me to fall into the same error as the poets; each, because he was skilled in his own art, insisted upon being the wisest man in other and greater things; and this mistake of theirs overshadowed what they possessed of wisdom. From this search, O Athenians, the consequences to me have been, on the one hand, many enmities, and of the most formidable kind, which have brought upon me many false imputations; but, on the other hand, the name and general repute of a wise man.'

Socrates, like Dr. Johnson, did not care for the country. 'Sir,' said the Doctor, 'when you have seen one green field, you have seen all green fields; Sir, I like to look upon men.

Let us walk down Cheapside.' In words of the same import does Socrates address Phædrus, who accused him of being unacquainted even with the neighbourhood of Athens. 'I am very anxious to learn; and from fields and trees I can learn nothing. I can only learn from men in the city.' And he was always to be found where men were assembled.* Ready to argue with every one, he demanded money from none. He gave no lectures: he only talked. He wrote no books: he argued.† He cannot properly be said to have had a school, since he did not even give a systematic exposition of his doctrine. What has been called his school, must be understood to refer to the many delighted admirers whose custom it was to surround him whenever he appeared, to talk with him as often as possible, and to accept his leading opinions.

'At what time Socrates relinquished his profession as a statuary we do not know; but it is certain that all the middle and later part of his life, at least, was devoted exclusively to the self-imposed task of teaching; excluding all other business, public or private, and to the neglect of all means of fortune. We can hardly avoid speaking of him as a teacher, though he himself disclaimed the appellation; his practice was to talk or converse. Early in the morning he frequented the public walks, the gymnasia for bodily training, and the schools where youths were receiving instruction; he was to be seen in the market-place at the hour when it was most crowded, among the booths and tables where goods were exposed for sale; his whole day was usually spent in this public manner. He talked with any one, young or old, rich or poor, who sought to address him, and in the hearing of all who stood by; not only he never either asked or received any reward, but he made no distinction of persons, never withheld

* XENOPHON: *Memorab.* i. 1. Καὶ ἔλεγε μὲν ὡς τὸ πολὺ, τοῖς δὲ βουλομένοις ἐξῆν ἀκούειν.

† We are, therefore, disposed to accept as historical, the language PLATO puts into his mouth respecting the inefficiency of books. Books cannot be interrogated, cannot answer; therefore, cannot teach; we can only learn from them that which we knew before.—*Phædrus*, p. 96.

his conversation from any one, and talked on the same general subjects with all. . . . As it was engaging, curious and instructive to hear, certain persons made it their habit to attend him in public as companions and listeners. These men, a fluctuating body, were commonly known as his disciples and scholars; though neither he nor his personal friends ever employed the terms *teacher* and *disciple* to describe the relation between them. Now no other person in Athens, nor in any other Grecian city, appears ever to have manifested himself in this perpetual and indiscriminate manner as a public talker for instruction. By the peculiar mode of life which Socrates pursued, not only his conversation reached the minds of a much wider circle, but he became more abundantly known as a person. While acquiring a few friends and admirers, and raising a certain intellectual interest in others, he at the same time provoked a large number of personal enemies. This was probably the reason why he was selected by Aristophanes and the other comic writers to be attacked as a general representative of philosophical and rhetorical teaching.*

Although Socrates was a knight-errant of philosophy, ever on the alert to rescue some forlorn truth from the dungeons of prejudice, and therefore was not scrupulous as to who or what his adversary might be, yet his especial enemies were the Sophists. He never neglected an opportunity of refuting them. He combated them with their own weapons, and on their own ground. He knew all their tactics. He knew their strength and their weakness. Like them he had studied Physics, in the speculations of the early thinkers; and like them had seen that these speculations led to no certainty. But he had not, like them, made scepticism a refuge; he had not proclaimed truth to be a phantom, because he could not embrace her. No: defeated in his endeavour to penetrate the mysteries of the world *without*, he turned his attention to the world *within*. For Physics he substituted Morals. The certitude which he failed to gain respecting the operations of

* GROTE: *Hist. of Greece*, viii. 555.

nature, had not shaken his conviction of the certitude of the moral truths which his conscience irresistibly impressed upon his attention. The world of sense might be fleeting and deceptive. The voice of conscience could not deceive. Turning his attention inwards, he discovered certain truths which admitted of no question. They were eternal, immutable, evident. These he opposed to the scepticism of the Sophists. Moral certitude was the rock upon which his shipwrecked soul was cast. There he could repose in safety. From its heights he could survey the world, and his relation to it.

Thus was his life spent. In his old age he had to appear before his judges to answer the accusations of Impiety and Immorality. He appeared, and was condemned.

When we think upon the character of this great man, whose virtues, luminous in the distance, and surrounded with the halo of imperishable glory, so impose on our imaginations that they seem as evident as they were exalted, we cannot hear of his trial and condemnation without indignant disgust at the Athenians. But, for the sake of humanity, let us be cautious ere we decide. The Athenians were volatile, credulous and cruel: all masses of men are. But it is too much to suppose that they, or any people, would have condemned Socrates had he appeared to them what he appears to us. Had a tyrant committed such a deed, the people would have avenged it. But Socrates was not to them what he appears to us. He was offensive to them, and paid the penalty.

A great man cannot be understood by his contemporaries. He can only be understood by his peers; and his peers are few. Posterity exalts a great man's fame by producing a number of great men to appreciate him. The great man is also necessarily a reformer in some shape or other. Every reformer has to combat existing prejudices and deep-rooted passions. To cut his own path, he must displace the rubbish which encumbers it. He is therefore in opposition to his fellow-men, and attacks their interests. Blinded by prejudice, by passion, and by interest, men cannot see the excellence of him they oppose; and hence it is that, as Heine

so admirably says, 'wherever a great soul gives utterance to its thoughts, there also is Golgotha.'

Reformers risk martyrdom; and Socrates was a reformer. Although, therefore, his condemnation appears to us very unjust and very frightful, to the Athenians it was no more than the banishment of Empedocles, or the condemnation of Protagoras. Pure as were his intentions, his actions and opinions were offensive. He incurred the hatred of party-spirit; and by that hatred fell. We recognise the purity of his intentions; he does not oppose *us*. We can pardon what we believe to be his errors, because those errors wage no war with our interests. Very differently were the Athenians situated. To them he was offensive. He hated injustice and folly of all kinds, and never lost an occasion of exposing them. A man who undertakes to be the critic of his age cannot escape the critic's penalty.*

But, perhaps, the most exasperating part of his behaviour was the undisguised contempt which he uniformly expressed for the readiness with which men assumed that they had a capacity for government. Only the wise, he said, were fit to govern, and they were few. Government is a science, and a difficult science. It is infinitely more difficult to govern a State than to govern the helm of a ship. Yet, the same people who would not trust themselves in a ship without an experienced pilot, not only trust themselves in a State with an inexperienced ruler, but also endeavour to become rulers themselves. This contempt was sufficient to cause his condemnation; but a better pretext was wanted, and it was found in his impiety. His defenders, ancient and modern, have declared that he was not guilty of impiety; and Xenophon 'wonders' that the charge could have been credited for an instant. But we believe that the charge was as much merited as in the case of the other philosophers against whom it was made.† He gave new interpretations to the

* The masterly account of the trial of Socrates, given by Mr. GROTE, should be read and re-read by all interested in this subject.

† SEXTUS EMPIRICUS, speaking of the Socratic heresy, calls it *ὡς ἐκραυλίζουσαν τὸ*

reigning dogmas; and opposing the mythological interpretations, he was chargeable with impiety.

It has been remarked by an anonymous writer, that, in complying with the rites of his country, Socrates avoided her superstitions. The right of sacrifice, so simple and natural that it harmonises with all and any religious truth, required to be guarded against a great abuse, and against this he warned his countrymen.

'When,' says Xenophon, 'he sacrificed, he feared not his offering would fail of acceptance in that he was poor; but, giving according to his ability, he doubted not but, in the sight of the Gods, he equalled those men whose gifts and sacrifices overspread the whole altar; for Socrates always reckoned upon it as a most indubitable truth, that the service paid the Deity by the pure and pious soul was the most grateful service.'

'When he prayed, his petition was only this,—that the Gods would give to him those things that were good. And this he did, forasmuch as they alone knew what was good for man. But he who should ask for gold or silver, or increase of dominion, acted not, in his opinion, more wisely than one who should pray for the opportunity to fight, or game, or anything of the like nature; the consequence whereof being altogether doubtful, might turn, for aught he knew, not a little to his disadvantage.'*

It was more difficult for the philosopher either innocently to comply with, or safely to oppose, that part of the popular religion which related to oracles and omens. Socrates appears to have done what was possible, and what therefore was best ultimately, towards correcting this great evil.

'He likewise asserted, that the science of divination was necessary for all such as would govern successfully, either cities or private families; for, although he thought every one

Belov.—*Adv. Math.* ii. p. 69. PLATO'S dialogues of *The Second Alcibiades* and the *Euthyphro* are evidence enough of Socrates' opposition to the Mythology of his day.

* *Memorabilia*, i. 3.

might choose his own way of life, and, afterwards, by his industry, excel therein (whether architecture, mechanics, agriculture, superintending the labourer, managing the finances, or practising the art of war), yet even here, the Gods, he would say, thought proper to reserve to themselves, in all these things, the knowledge of that part of them which was of the most importance, since he who was the most careful to cultivate his field, could not know, of a certainty, who should reap the fruit of it.

'Socrates therefore esteemed all those as no other than madmen who, excluding the Deity, referred the success of their designs to nothing higher than human prudence. He likewise thought those not much better who had recourse to divination on every occasion, as if a man was to consult the oracle whether he should give the reins of his chariot into the hands of one ignorant or well versed in the art of driving, or place at the helm of his ship a skilful or unskilful pilot.

'He also thought it a kind of impiety to importune the Gods with our inquiries concerning things of which we may gain the knowledge by number, weight, or measure; it being, as it seemed to him, incumbent on man to make himself acquainted with whatever the Gods had placed within his power: as for such things as were beyond his comprehension, for these he ought always to apply to the oracle; the Gods being ever ready to communicate knowledge to those whose care had been to render them propitious.'*

The trial of Socrates belongs rather to the history of Greece than to the history of Philosophy. It was a political trial. His bearing during the whole period was worthy of him: calm, grave, and touching; somewhat haughty perhaps, but with the haughtiness of a brave soul fighting for the truth. It increased the admiration of his admirers, and exasperated his adversaries.

Plato, then a young man, was present at the trial, and has preserved an admirable picture of it in his *Apology*. The

* *Memorabilia*, i. 1.

closing speech, made by Socrates, after sentence of death had been pronounced, is supposed to be given with substantial accuracy by Plato. We extract it:—

‘It is for the sake of but a short span, O Athenians, that you have incurred the imputation, from those who wish to speak evil of the city, of having put to death Socrates, a wise man (for those who are inclined to reproach you will say that I am wise, even if I am not). Had you waited a short time the thing would have happened without your agency; for you see my years; I am far advanced in life, and near to death. I address this not to all of you, but to those who have voted for the capital sentence, and this too I say to the same persons,—Perhaps you think that I have been condemned for want of skill in such modes of working upon your minds, as I might have employed with success, if I had thought it right to employ all means in order to escape from condemnation. Far from it: I have been condemned, and not from want of things to say, but from want of daring and shamelessness; because I did not choose to say to you the things which would have been pleasantest for you to hear, weeping, and lamenting, and saying and doing other things which I affirm to be unworthy of me; as you are accustomed to see others do. But neither did I then think fit to do or say anything unworthy of a free man; nor do I now repent of having thus defended myself. I would far rather have made the one defence and die, than have made the other and live. Neither in a court of justice, nor in war, ought we to make it our object that, whatever happen, we may escape death. In battle it is often evident that a man may save his life by throwing away his arms and imploring mercy of his pursuers; and in all other dangers there are many contrivances by which a person may get off with life if he dare do or say everything. The difficulty, O Athenians, is not to escape from death, but from guilt; for guilt is swifter than death, and runs faster. And now I, being old and slow of foot, have been overtaken by Death, the slower of the two; but my accusers, who are brisk and vehement, by wickedness,

the swifter. We quit this place: I have been sentenced by you to death, but they having sentence passed upon them, by Truth, of guilt and injustice. I submit to my punishment, and they to theirs.

‘But I wish, O men who have condemned me, to prophesy to you what next is to come. I say, then, that, immediately after my death, there will come upon you a far severer punishment than that which you have inflicted upon me; for you have done this, thinking by it to escape from being called to account for your lives. But I affirm that the very reverse will happen to you. There will be many to call you to account whom I have hitherto restrained, and whom you saw not; and, being younger, they will give you more annoyance, and you will be still more provoked; for, if you think by putting men to death to deter others from reproaching you with living amiss, you think ill. That mode of protecting yourselves is neither very possible nor very noble: the noblest and the easiest too is not to cut off other people, but so to order yourselves as to attain the greatest excellence.

‘Thus much I beg of you: When my sons grow up, punish them, O Athenians, by tormenting them as I tormented you, if they shall seem to study riches, or any other ends, in preference to virtue. And, if they are thought to be something, being really nothing, reproach them, as I have reproached you, for not attending to what they ought, and fancying themselves something when they are good for nothing. And, if you do this, both I and my sons shall have received what is just at your hands.

‘It is now time that we depart, I to die, you to live; but which has the better destiny is unknown to all except the Gods.’

This is very grand and impressive, and paints the character of the man. *Magno animo et vultu carcerem intravit*, says Seneca. He consoled his weeping friends, and gently upbraided them for their complaints at the injustice of the sentence. No man ever faced death with greater calmness; for no man ever welcomed it with greater faith as a new birth to a higher state of being.

He would have been executed the next day, but it happened that the next day was the first of the festival of the Delian Theoria, during which no criminal could be put to death. This festival lasted thirty days. Socrates, though in chains, and awaiting his end, spent the interval in cheerful conversation with his friends, and in composing verses. 'During this time,' says Xenophon, 'he lived before the eyes of all his friends in the same manner as in former days; but now his past life was most admired on account of his present calmness and cheerfulness of mind.' On the last day he held a conversation with his friends on the immortality of the soul. This forms the subject of Plato's *Phædo*. The arguments in that dialogue are most probably Plato's own; and it is supposed that the dying speech of Cyrus, in Xenophon's *Cyropædia*, is a closer copy of the opinions of Socrates.

Phædo, describing the impression produced on him by the sight of Socrates on this final day, says:—'I did not feel the pity which it was natural I should feel at the death of a friend: on the contrary, he seemed to me perfectly happy as I gazed on him and listened to him; so calm and dignified was his bearing. And I thought that he only left this world under the protection of the Gods, who destined him to a more than mortal felicity in the next.' He then details the conversation on the immortality of the soul; after which, he narrates the close of that glorious life in language worthy of it. Even in the English version of Taylor the beauty of the narrative stands manifestly out.

'When he had thus spoke, he rose, and went into a room, that he might wash himself, and Crito followed him: but he ordered us to wait for him. We waited, therefore, accordingly, discoursing over, and reviewing among ourselves, what had been said, and sometimes speaking about his death, how great a calamity it would be to us; and sincerely thinking that we, like those who are deprived of their father, should pass the rest of our life in the condition of orphans. But, when he had washed himself, his sons were brought to

him (for he had two little ones, and one considerably advanced in age), and the women belonging to his family likewise came in to him: but, when he had spoken to them before Crito, and had left them such injunctions as he thought proper, he ordered the boys and women to depart; and he himself returned to us. And it was now near the setting of the sun: for he had been absent for a long time in the bathing-room. But, when he came in from washing, he sat down, and did not speak much afterwards; for, then, the servant of the eleven magistrates came in, and, standing near him, I do not perceive that in you, Socrates (says he), which I have taken notice of in others; I mean that they are angry with me, and curse me, when, being compelled by the magistrates, I announce to them that they must drink the poison. But, on the contrary, I have found you at the present time to be the most generous, mild, and best of all the men who ever came into this place: and, therefore, I am now well convinced that you are not angry with me, but with the authors of your present condition. You know those whom I allude to. Now, therefore (for you know what I came to tell you), farewell! and endeavour to bear this necessity as easily as possible. And at the same time, bursting into tears, and turning himself away, he departed.

'Then Crito gave the sign to the boy that stood near him. And the boy departing, and, having staid for some time, came, bringing with him the person that was to administer the poison, and who brought it properly prepared in a cup. But, Socrates, beholding the man,—It's well, my friend (says he); but what is proper to do with it? for you are knowing in these affairs. You have nothing else to do (says he) but when you have drunk it to walk about, till a heaviness takes place in your legs, and afterwards lie down: this is the manner in which you should act. And, at the same time, he extended the cup to Socrates. But Socrates received it from him, and, indeed, with great cheerfulness; neither trembling nor suffering any alteration for the worse in his colour or countenance, but, as he was accustomed to do, beholding the

man with a bull-like aspect. What say you (says he) respecting this potion? Is it lawful to make a libation of it, or not? We only bruise (says he), Socrates, as much as we think sufficient for the purpose. I understand you (says he); but it is certainly both lawful and proper to pray to the Gods, that my departure from hence thither may be attended with prosperous fortune; which I entreat them to grant may be the case. And, at the same time ending his discourse, he drank the poison with exceeding facility and alacrity. And thus far, indeed, the greater part of us were tolerably well able to refrain from weeping; but, when we saw him drinking, and that he had drunk it, we could no longer restrain our tears. But from me, indeed, notwithstanding the violence which I employed in checking them, they flowed abundantly; so that, covering myself with my mantle, I deplored my misfortune. I did not, indeed, weep for him, but for my own fortune, considering what an associate I should be deprived of. But, Crito, who was not able to restrain his tears, was compelled to rise before me. And Apollodorus, who, during the whole time prior to this, had not ceased from weeping, then wept aloud and with great bitterness; so that he infected all who were present except Socrates. But Socrates, upon seeing this, exclaimed: What are you doing, excellent men? For, indeed, I principally sent away the women, lest they should produce a disturbance of this kind. For I have heard it is proper to die attended with propitious omens. Be quiet, therefore, and summon fortitude to your assistance. But when we heard this we blushed, and restrained our tears. But he, when he found, during his walking, that his legs felt heavy, and had told us so, laid himself down in a supine position. For the man had ordered him to do so. And, at the same time, he who gave him the poison, touching him at intervals, considered his feet and legs. And, after he had vehemently pressed his foot, he asked him if he felt it. But Socrates answered he did not. And, after this, he again pressed his thighs: and, thus ascending with his hand, he showed us that he was cold and

stiff. And Socrates also touched himself, and said that when the poison reached his heart he should then leave us. But now his lower belly was almost cold: when, uncovering himself (for he was covered), he said (which were his last words), Crito, we owe a cock to Æsculapius. Discharge this debt, therefore, for me, and don't neglect it. It shall be done (says Crito); but consider whether you have any other commands. To this inquiry of Crito he made no reply; but shortly after moved himself, and the man covered him. And Socrates fixed his eyes. Which, when Crito perceived, he closed his mouth and eyes. This was the end of our associate; a man, as it appears to me, the best of those whom we were acquainted with at that time; and, besides this, the most prudent and just.'

Thus perished this great and good man. His character we have endeavoured to represent fairly, though briefly. Let us now add the summing-up of Xenophon, who loved him tenderly, and expressed his love gracefully:—

'As to myself, knowing him of a truth to be such a man as I have described; so pious towards the Gods, as never to undertake anything without first consulting them; so just towards men, as never to do an injury, even the very slightest, to any one, whilst many and great were the benefits he conferred on all with whom he had any dealings; so temperate and chaste, as not to indulge any appetite or inclination at the expense of whatever was modest and becoming; so prudent as never to err in judging of good and evil, nor wanting the assistance of others to discriminate rightly concerning them; so able to discourse upon, and define with the greatest accuracy, not only those points of which we have been speaking, but likewise every other, and, looking as it were into the minds of men, discover the very moment for reprehending vice, or stimulating to the love of virtue: experiencing, as I have done, all these excellences in Socrates, I can never cease considering him as the most virtuous and the most happy of all mankind. But, if there is any one who is disposed to think otherwise, let him go

and compare Socrates with any other, and afterwards let him determine.*

After-ages have cherished the memory of his virtues and his fate; but without profiting much by his example, and without learning toleration from his story.

§ II. PHILOSOPHY OF SOCRATES.

Opinions vary so considerably respecting the philosophy of Socrates, and materials whereby they can be tested are so scanty, that any attempt at exposition must be made with diffidence. The historian has to rely solely on his critical skill; and on such grounds he will not, if prudent, be very confident.

Amongst the scattered materials from which an opinion may be formed are, 1st: The very general tradition of Socrates having produced a revolution in thought; in consequence of which he is by all regarded as the initiator of a new epoch; and by some as the founder of Greek Philosophy, properly so called. 2ndly. The express testimony of Aristotle, that he first made use of *definitions* and proceeded by *induction*.† These two positions involve each other. If Socrates produced a revolution in philosophy, he could only have done so by a new Method or new development of Method. That development we see exhibited in the phrase of Aristotle, but it is there only exhibited in a brief concentrated manner, and requires to be elucidated.

Mr. Grote remarks that it requires at the present day some mental effort to see anything important in the invention of notions so familiar as those of Genus—Definition—Individual things as comprehended in a genus—what each thing is, and to what genus it belongs, etc. Nevertheless, four centuries before Christ these terms denoted mental processes which few, if any but Socrates, had a distinct recognition of, in the

* *Memorabilia*, iv. 7.

† 'There are two things of which Socrates must justly be regarded as the author, the *Inductive Reasoning* and *Abstract Definitions*,'—τοὺς τ' ἐπακτικούς λόγους καὶ τὸ δρίξασθαι καθόλου. (ARIST. *Metaph.* xiii. 4.)

form of analytical consciousness. 'The ideas of men—speakers as well as hearers, the productive minds as well as the recipient multitude—were associated together in groups, favourable rather to emotional results, or to poetical, rhetorical narrative, and descriptive effect, than to methodical generalization, to scientific conception, or to proof either inductive or deductive. That reflex act of attention which enables men to understand, compare, and rectify their own mental process was only just beginning. It was a recent novelty on the part of the rhetorical teachers to analyse the component parts of a public harangue, and to propound some precepts for making men tolerable speakers. It may be doubted whether any one before Socrates ever used the words Genus and Species (originally meaning Family and Form), in the philosophical sense now exclusively appropriated to them. Not one of those many names (called by logicians *names of the second intention*) which imply distinct attention to various parts of the logical process, and enable us to criticize it in detail, then existed. All of them grew out of the schools of Plato, Aristotle, and the subsequent philosophers, so that we can thus trace them in their beginning to the common root and father, Socrates.* The novelty was very distasteful to all who were not seduced by it. Men resent being forced to rigour of speech and thought; they call you 'pedantic' if you insist on their using terms with definite meanings: they prefer the loose flowing language of indefinite association which picks up in its course a variety of heterogeneous meanings; and are irritated at any speaker who points out to them the inaccuracy of their phrases. Aristotle says it was thought bad taste in his day—ἡ ἀκριβολογία μικροπρεπής: and Timon the Sillograph sarcastically calls Socrates one of the ἀκριβόλογοι, as if precision of language were a vice.

We have here the ground of opposition between Socrates and the Sophists distinctly marked out. It was the opposition

* GROTE, viii. 578.

of Dialectics to Rhetoric. The business of the rhetorician is to persuade, and for persuasion he must enlist the sympathies of his audience by adopting their general convictions, and merely impressing on those convictions a particular direction. The grounds of those convictions, or their validity, are never questioned. It is otherwise with the dialectician: his business is discussion. He ploughs up the old landmarks. He questions the old axioms. He has to foresee and meet every objection which intellectual scrutiny can discern. The Sophists, sceptical of man's power of reaching absolute truth, were content, as practical men, to deal with opinions already existing. Socrates, sceptical of man's having yet reached the truth, was intent on enforcing this conviction of the illusory nature of established opinions. He felt that there was a discoverable truth, and knew that men had not yet discovered it. How was the discovery to be made?

First, by clearing the mind of all its incoherent and unscientific notions; secondly, by replacing these with scientific notions. Men used language which was full of emotional meaning to them, but on which there was little intellectual agreement. All men, for example, agreed that wickedness deserves punishment; but what was wickedness they were unable to define. Socrates required them to ascertain what it was they were speaking of; to define wickedness, which, being a general term, had, as he thought, some common objective characteristic corresponding in all cases to the common subjective feeling.

'The notions of Genus, subordinate genera, and individuals as comprehended under them, were at that time newly brought into clear consciousness in the human mind. The profusion of logical distribution employed in some of the dialogues of Plato seems partly traceable to his wish to familiarize his hearers with that which was then a novelty, as well as to enlarge its development and diversify its mode of application.' 'We must always consider the Method of Socrates in conjunction with the subjects to which he applied it. . . On such questions as these—What is justice?—What

is piety?—What is democracy?—What is law?—every man fancied that he could give a confident opinion, and even wondered that any other person should feel a difficulty. When Socrates, professing ignorance, put any such question, he found no difficulty in obtaining an answer, given off-hand and with very little reflection. The answer purported to be the explanation or definition of a term, familiar indeed, but of wide and comprehensive import,—given by one who had never before tried to render to himself an account of what it meant. Having got this answer, Socrates put fresh questions, applying it to specific cases, to which the respondent was compelled to give answers inconsistent with the first; showing that the definition was either too narrow or too wide, or defective in some essential condition. The respondent then amended his answer; but this was a prelude to other questions, which could only be answered in ways inconsistent with the amendment; and the respondent, after many attempts to disentangle himself, was obliged to plead guilty to the inconsistencies, with an admission that he could make no satisfactory answer to the original query, which at first had appeared so easy and familiar. . . The discussion first raised by Socrates turns upon the meaning of some large generic term. The queries whereby he follows it up bring the answer given into collision with various particulars which it ought not to comprehend, or with others which it ought to comprehend but does not. The inconsistencies into which the hearer is betrayed in his various answers proclaim to him the fact that he has not yet acquired anything like a clear and full conception of the common attribute which binds together the various particulars embraced under some term which is ever upon his lips. He is thus put upon the train of thought which leads to a correction of the generalization, and lights him on to that which Plato calls seeing the One in the Many, and the Many in the One.*

It is scarcely necessary for us to pause here to consider

* GROTE, viii. 583-8.

the misleading tendencies of such a search for an objective existence corresponding with a subjective creation, or general term which indicated the simple fact that many objects were capable of exciting the feeling of admiration or of repugnance, owing, not to any common property in the objects, but to a common property in the subject: not because the maiden, the lyre, the pot, the horse, and the generous deed had any one thing in common, which was Beauty; but because men had a susceptibility of pleasurable emotion which these various objects could excite, and were consequently grouped together under the general term beautiful.

Yet, although this search after an objective reality for a subjective fiction was misleading, and metaphysical in the bad sense of the word, it was, as Aristotle remarked, a novelty, and a valuable novelty, introduced by Socrates in his search after Definitions. When he insisted that all persons are just through Justice, wise through Wisdom, good through Goodness, beautiful through Beauty, and held that Justice, Wisdom, Goodness, and Beauty were things objectively existing, he was only logically carrying out the fundamental assumption of the Subjective Method; and perhaps he aided in the final rejection of that Method by the conclusions to which he forced it. But although in one sense his procedure was misleading, in another it was invaluable. It impressed upon his contemporaries and successors the vanity of their supposed knowledge, and the necessity of examining more rigorously into the things they were wont to take for granted.

This new development of the old Method (improperly called a *change* in Method by Mr. Grote) was one which, considered scientifically, we may reject; but, considered historically, it appears important. On a first glance the pre-Socratic thinkers seem nearer positive science than the post-Socratic thinkers. Plato and Aristotle appear as splendid will-o'-the-wisps leading men away from the firm path of objective research. But a closer examination dispels this suggestion. They are really in advance of their predecessors, because

they are profoundly convinced of the necessity for criticism. The early thinkers were unaware of the many plausible solutions which would inevitably arise, insufficiently aware of the sources of error;* and when Socrates introduced his method of negation and cross-questioning, he unsealed their eyes, and made them aware of the prematurity of their conclusions.

It is only by watching the operation of uncultivated minds that we can bring clearly before ourselves the mental condition of the early thinkers, who were contented with simple affirmations, and seldom thought of submitting hypothesis to verification. A plausible guess was accepted as needing no confirmation. The idea of cross-questioning the guesser, of making him confront his assertion with fact, rarely occurred to them. Hence the rudeness of the shock when they came in contact with Socrates. They touched a torpedo.

When it is said that Socrates produced a complete revolution in Method by placing the negative point of view foremost, and giving to the cross-examining Elenchus an emphasis it never had before, this must not be understood as implying a real revolution in the mental attitude. The old subjective attitude remained. The novelty was in the importance assigned to verification as a philosophical necessity; but the kind of verification was, as of old, purely subjective. Nor, although there was a certain change in the direction of inquiry, was there any change in the spirit.

It was he who first considered Ethics as a possible science, and, with the exclusiveness natural to ardent reformers, soon began to consider it the only science. While all previous philosophers had been occupied with the Cosmos as a whole, blending together astronomy, cosmogony, geometry, metaphysics, and physics, he isolated ethics from this confused mass, insisted on its importance as *the* object of study, much in the same way as Hippocrates isolated medicine from the

* 'The early thinkers,' says ARISTOTLE, 'knew nothing of Dialectics.'

undifferentiated philosophical speculation. The uncertainty which reigned, the hopelessness of the efforts, instilled in his mind the belief that the Gods did not mean man to penetrate their secrets. Nothing, therefore, remained but to seek for certainty where alone it could be found, in the human conscience. He bade men study human facts and leave the divine to the Gods.

His influence, to a great extent, for a time arrested cosmical speculation by the force of his dialectics, which exposed the ignorance of men on topics seemingly most familiar to them. 'When we look at the number of these early theories and the great need which all of them had to be sifted and scrutinized, we shall recognise the value of the negative procedure under such circumstances, whether the negationist had or had not any better affirmative theory of his own. Socrates, moreover, not only turned the subject-matter of discussion from physics to ethics, but also brought into conscious review the *method* of philosophizing; which was afterwards still further considered and illustrated by Plato. General and abstract terms and their meaning stood out as the capital problems of philosophical research, and as the governing agents of the mind during the process; in Plato and Aristotle, and the dialectics of their age, we find the meaning or concept corresponding to these terms invested with an objective character, and represented as a cause or beginning, by which or out of which real concrete things were produced. Logical, metaphysical, ethical entities, whose existence consists in being named and reasoned about, are presented to us (by Plato) as the real antecedents and producers of the sensible Kosmos and its contents, or (by Aristotle) as external with the Kosmos, but as its underlying constituents, the *ἀρχαί*, primordia or ultima, into which it was the purpose of the philosopher to reduce sensible things.*

Conceit of knowledge, without the reality, was by Socrates

* GROTE, *Plato*, i. 95.

perpetually stigmatized as the most disgraceful of mental defects,* and the whole effort of his terrible questioning—the 'cross-examining Elenchus'—was to make men aware of this conceit, to prove to them that their knowledge was a *sham*, as Carlyle would call it. Instead of the loose, heterogeneous conceptions with which men deceived themselves and others into the belief of knowledge, he insisted on the substitution of rigorous and distinct conceptions.

'Every man,' says Mr. Grote, 'found persuasions in his own mind without knowing how they came there; and witnessed them in others as portions of a general fund of unexamined commonplace and credence. Because the words were at once of large meaning, embodied in old familiar mental processes, and surrounded by a strong body of sentiment, the general assertions in which they were embodied appeared self-evident and imposing to every one: so that, in spite of continual dispute in particular cases, no one thought himself obliged to analyse the general propositions themselves, or to reflect whether he had verified their import and could apply them rationally and consistently.'

The phenomenon here adverted to is too obvious, even at the present day, to need further elucidation. In morals, politics, political economy, on all social subjects, the same confident persuasion of knowledge exists—the same propagation by authority and example of convictions unverified and resting only on sentiment—the same illusion that because every man is familiar with the language, therefore he is master of the facts, and is competent to apply comprehensive words and assume the truth of propositions without any special analysis or study. 'A man who has never bestowed special study on astronomy knows that he is ignorant of it: to fancy that he knows it without such preparation would be held an absurdity. While the scientific point of view has thus acquired complete predominance in reference to the physical world, it has made little way comparatively on topics

* PLATO, *Apologia*, p. 29 (p. 114, ed. Bekker): καὶ τοῦτο πῶς οὐκ ἀμάρτια ἐστὶν αὕτη ἢ ἐπονείδιστος, ἢ τοῦ οἰεσθαι εἰδέναι ἃ οὐκ οἶδεν;

regarding man and society, wherein "fancy of knowledge without the reality" continues to reign, not without criticism and opposition, yet still as a paramount force. And if a new Socrates were now to put the same questions in the marketplace to men of all ranks and professions, he would find the like confident persuasion and unsuspecting dogmatism as to generalities, the like faltering blindness and contradiction when tested by cross-examining details.'

Socrates, having put an end to this confident delusion, had to replace it by real knowledge.

How could this be done but by Definitions? To know the essence of a thing you must consider it as distinct from everything else, you must *define* it; by defining it you demarcate it from what it is *not*, and so present the thing before you in its essence.

It was a fundamental conviction with him that it is impossible to start from one true thought, and be entangled in any contradiction with another true thought; knowledge derived from any one point, and obtained by correct combination, cannot contradict that which has been obtained from any other point. He believed that Reason was pregnant with Truths, and only needed an accoucheur. An accoucheur he announced himself; his main instruments were Definitions. By Definition he enabled the thinker to separate the particular thought he wished to express from the myriad of other thoughts which clouded it. By Definition he enabled a man to contemplate the essence of a thing, because he admitted nothing which was not essential into the definition.

The radical mistake here is the confusion between Definitions of Names and Definitions of Things. In the Definition of a Name nothing more is implied than the meaning intended to be affixed; in the definition of a Thing there is, over and above this intended meaning, the assertion of a corresponding fact which the definition describes.

We have more than once commented on the natural tendency of the early thinkers to mistake distinctions in words for distinctions in things. We have now to signalize, in the

history of speculation, the reduction of this tendency to a systematic formula. Names henceforth have the force of things.* A correct Definition is held to be a true description of the thing *per se*. The *explanation of terms* as equivalent to the *explanation of things*, and the exhibition of the nature of any thing in a definition as equivalent to actual analysis of it, are the central errors of metaphysical philosophy.

When stated in a naked manner, the absurdity is apparent; but it may be so disguised as to look philosophic. Hence the frequent use of such phrases as that certain properties are 'involved in the idea' of certain things; as if being involved in the idea, *i.e.* being included in the definition, necessarily implied a correspondent *objective* existence; as if human conceptions were the faithful copies of external things. The conceptions of men widely differ; consequently different properties are 'involved' in these different conceptions; but all cannot be true, and the question arises, Which conception is true? To answer this question by anything like a definition, is to argue in a circle. A principle of certitude must be sought. That principle, however, is still to seek.

With respect to the second character of the Socratic Method, the employment of Induction, I cannot agree with those who consider it an anticipation of Bacon. It is perfectly true that there is a certain resemblance between his practice of analyzing the confused generalizations of popular judgments, and of vividly recalling the particulars on which these generalizations were founded, and the Baconian practice of criticising the errors of *intellectus sibi permissus*; it is true also that he did constantly proceed by induction. But it is not less true that the induction he employed was that *enumeration of particulars* (reasoning by analogy) which it is Bacon's merit to have exposed; and thus he not only differed from Bacon in the object of his search, but in the method of search. Nevertheless the testimony of Aristotle that

* See PLATO's *Cratylus*.

Socrates was the first to reason inductively—that is to say, to employ induction as a conscious method—points to an important characteristic; and when we compare the Socratic procedure with that of all previous philosophies, we see how striking a novelty it must have been.

Socrates has been almost taunted with never having promulgated any system of his own. His rank in the history of philosophy has been questioned, and has been supposed to be only that of a moralist. A passage of Aristotle has been quoted as decisive on this point: 'The speculations of Socrates were only concerning Ethics, and not at all concerning Nature in general' (*τῆς ὁλῆς φύσεως*). But this is not *all* the passage: it continues thus: 'In these speculations he sought the Abstract (*τὸ καθόλου*), and was the first who thought of giving definitions.' Now in this latter portion we believe there is contained a hint of something more than the mere moralist—a hint of the metaphysician. On turning to another part of Aristotle's treatise* we accordingly find this hint more clearly brought out; we find an express indication of the metaphysician. The passage is as follows: 'Socrates concerned himself with ethical virtues, and he first sought the abstract definitions of these. Before him Democritus had only concerned himself with a part of Physics, and defined but the Hot and the Cold. But Socrates, reasonably (*εὐλόγως*), sought the Essence of Things, *i.e.* sought *what exists*.'

Moreover, in another passage (lib. iii. c. 2) Aristotle reproaches Aristippus for having rejected science, and concerned himself solely with morals. This is surely negative evidence that Socrates was not to be blamed for the same opinion; otherwise he would have been also mentioned.

It was a natural mistake to suppose that Socrates was only a moralist, seeing that his principal topics were always Man and Society, and never Physical speculations, which he deemed beyond the reach of human intellect. If, however,

* *Metaph.* xiii. 4.

Socrates had been merely a moralist, his place in the history of Philosophy would not have been what it is; no Plato, no Aristotle would have called him master. He made a new epoch. The previous philosophers had directed their attention to external Nature, endeavouring to explain its phenomena; he gave up all such speculations, and directed his attention solely to the nature of Knowledge.

The reader may now begin to appreciate the importance of Definitions in the Socratic Method, and may understand why Socrates did not himself invent systems, but only a Method. He likened himself to a Midwife, who, though unable to bring forth children herself, assisted women in their labours. He believed that in each man lay the germs of wisdom. He believed that no science could be taught; only drawn out. To borrow the ideas of another was not to learn; to guide oneself by the judgment of another was blindness. The philosophers, who pretended to teach everything, could teach nothing; and their ignorance was manifest in the very pretension. Each man must conquer truth for himself, by rigid struggle with himself. He, Socrates, was willing to assist any man when in the pains of labour: he could do no more.

Such being the Method, we cannot wonder at his having attached himself to Ethical rather than to Physical speculations. His philosophy was a realization of the inscription at Delphos—*Know Thyself*. It was in himself that he found the ground of certitude which was to protect him against scepticism. It was therefore moral science which he prized above all others. Indeed, we have great reason to believe that his energetic denouncement of Physical speculations as reported by Xenophon, was the natural, though exaggerated, conclusion to which he had been hurried by a consideration of the manifold absurdities into which they drew the mind, and the scepticism which they induced. There could be nothing but uncertainty on such subjects.

'I have not leisure for such things,' he is made to say by Plato, 'and I will tell you the reason: I am not yet able, according to the Delphic Inscription, to *Know myself*; and it

appears to me very ridiculous, while ignorant of myself, to inquire into what I am not concerned in.* That he did, however, at one period occupy himself with them is clear from other sources, and is a point in the comedy of the *Clouds*, where he is represented 'air-treading and speculating about the sun,'—ἀεροβατῶ καὶ περιφρονῶ τὸν ἥλιον,—and his disciples seeking things hidden underground—τὰ κατὰ γῆς. This has led many to suppose that Aristophanes knew nothing whatever of Socrates, but only took him as an available comic type of the Sophists,—a supposition to which there are several objections. Firstly, it is not usual in satirists to select for their butt a person of whom they know nothing. Secondly, Socrates, of all Athenians, was the most notorious, and most easily to be acquainted with in a general way. Thirdly, he could not be a type of the Sophists, in as far as related to physical speculations, since we well know the Sophists disregarded them. Fourthly, he did occupy himself with Physics early in his career, although in after-life he regarded such speculations as trivial.

It was quite possible that Aristophanes should have made no such nice discrimination between the dialectical quibbling of Socrates and that of the Sophists, as would prevent him from representing Socrates teaching 'the art to make the worse appear the better reason;'† but it is scarcely credible that he should have made so flagrant a mistake as to accuse Socrates of busying himself with Physics, when every one of the audience could answer that Socrates never troubled himself at all about it. In our day Proudhon and Louis Blanc are often classed together as teachers of the same Socialist doctrines; or Strauss and Feuerbach as teachers of the same theological doctrines; but no satirist would laugh at Louis Blanc for his astronomical speculations, or at Strauss for his devotion to the Microscope. The Aristophanic evidence, therefore, seems perfectly admissible as respects the physical speculations of Socrates at or about the time when

* *Phædrus*, p. 8.

† *Nubes*, v. 112–15.

the *Clouds* was produced. If they were afterwards relinquished, it was because they led to no certainty.

That Philosophy, and not Morals, was really the aim of Socrates, is clear from his subordination of all morals to science. He considers Virtue to be identical with Knowledge.* Only the wise man, said he, can be brave, just, or temperate. Vice of every kind is Ignorance; and involuntary, because ignorant. If a man is cowardly, it is because he does not rightly appreciate the importance of life and death. He thinks death an evil, and flees it. If he were wise, he would know that death is a good thing, or, at the worst, an indifferent one, and therefore would not shun it. If a man is intemperate, it is because he is unable to estimate the relative value of present pleasure and future pain. Ignorance misleads him. It is the nature of man to seek good and shun evil: he would never seek evil, knowing it to be such; if he seeks it, he mistakes it for good: if he is intemperate, it is because he is unwise.

Nor is it difficult to trace the origin of this conception in his mind. The Pythian oracle had declared him to be the wisest of men. The assertion greatly puzzled him, for he found on deep introspection that he knew nothing; all his fancied knowledge was that conceit of knowledge without the reality, which he saw puffing up other men; and his sole distinction was that he knew the depth of his own ignorance, while they believed themselves to be knowing; and it was because he knew this that he understood the meaning of the

* Φρονήσεις φερεῖν εἶναι πάσας τὰς ἀρετάς.—ARISTOT. *Ethic. Nicomach.* vi. 13. PLATO, in the *Meno*, makes him maintain that Virtue cannot be Science, cannot be taught. But this is not Socratic. 'Whether Virtue can be taught was a question much agitated in the time of Socrates, who appears to give contradictory decisions on different occasions. Comp. PLATO, *Meno*, pp. 96, 98, with *Protagoras*, p. 361, in the latter of which passages he censures his own inconsistency, in first denying that Virtue can be taught, and then maintaining that Virtue is Science. Ascending to XENOPHON, *Mem.* i. 2, 19, Socrates seems to have adopted the common-sense view that Virtue is partly matter of teaching, partly of practice (ἀσκητόν), and partly of natural disposition. But XENOPHON was unconscious of the logical difficulty of reconciling this with that identification of Virtue with Science or Wisdom which he elsewhere distinctly attributes to his master.'—THOMPSON'S Note to *Butler's History of Philosophy*, i. 374.

oracle. Thus much we have on his explicit authority. If we now consider that his title of the 'wisest' was owing to the profound consciousness of the unreality of all which hitherto had passed for wisdom (the proof of which was exposed by means of his cross-examining Elenchus), we shall be able to understand how it was he came to make his Method in and for itself the great aim of Philosophy, and how instead of desiring to make converts to any system, or to gain acceptance for any special theories on physics or ethics, he always and everywhere desired to awaken the cross-examining spirit in the minds of his hearers, so that each in his own turn might awaken it in others, because in this, and this alone, consisted real Wisdom. Previous philosophies had shown the futility of speculation; certitude was nowhere to be had; all such theories were but the conceit of knowledge. The Method which he taught was that by which alone man could become wiser and better.

It is clear that the novelty of the Method so completely fascinated him as to prevent his detecting the confusion he made between end and means. And the reader may understand how such a confusion might very naturally have maintained itself, if he reflects how very analogous is the pursuit of purely mathematical science by hundreds who care nothing for the applications of mathematics. Lying at the base of all physical science is a great and complex science of Quantity,—the one indispensable Instrument by means of which Knowledge becomes Science (for Science is only quantitative knowledge); but so vast and so complex is this Instrument, that numerous intellects are constantly engaged in studying and perfecting it, never once withdrawn from it by any attempt at application. In a similar way Socrates, and for the most part Plato likewise, cared exclusively for Method; perfecting the Instrument of search, rather than seeking.

Although Socrates was not the first to teach the doctrine of the immortality of the soul, he was the first to give it a philosophical basis. Nor can we read without admiration

the arguments by which he anticipated writers on Natural Theology, by pointing out the evidences of a beneficent Providence. Listen to Xenophon:—

'I will now relate the manner in which I once heard Socrates discoursing with Aristodemus, surnamed *the Little*, concerning the Deity; for observing that he neither prayed nor sacrificed to the Gods, but, on the contrary, ridiculed and laughed at those who did, he said to him:—

'Tell me, Aristodemus, is there any man whom you admire on account of his merit? Aristodemus having answered "Many,"—Name some of them, I pray you. I admire, said Aristodemus, Homer for his Epic poetry, Melanippides for his dithyrambics, Sophocles for tragedy, Polycletus for statuary, and Zeuxis for painting.

'But which seems to you most worthy of admiration, Aristodemus;—the artist who forms images void of motion and intelligence, or one who hath the skill to produce animals that are endued not only with activity, but understanding?—The latter, there can be no doubt, replied Aristodemus, provided the production was not the effect of chance, but of wisdom and contrivance.—But since there are many things, some of which we can easily see the use of, while we cannot say of others to what purpose they were produced, which of these, Aristodemus, do you suppose the work of wisdom?—It should seem the most reasonable to affirm it of those whose fitness and utility are so evidently apparent.

'But it is evidently apparent that He who at the beginning made man, endued him with senses because they were good for him; eyes, wherewith to behold whatever was visible; and ears, to hear whatever was to be heard; for say, Aristodemus, to what purpose should odours be prepared, if the sense of smelling had been denied? or why the distinctions of bitter and sweet, of savoury and unsavoury, unless a palate had been likewise given, conveniently placed, to arbitrate between them and declare the difference? Is not that Providence, Aristodemus, in a most eminent manner conspicuous, which, because the eye of man is so delicate in its

contexture, hath therefore prepared eyelids like doors, whereby to secure it, which extend of themselves whenever it is needful, and again close when sleep approaches? Are not these eyelids provided as it were with a fence on the edge of them, to keep off the wind and guard the eye? Even the eyebrow itself is not without its office, but, as a penthouse, is prepared to turn off the sweat, which, falling from the forehead, might enter and annoy that no less tender than astonishing part of us. Is it not to be admired that the ears should take in sounds of every sort, and yet are not too much filled by them? That the foreteeth of the animal should be formed in such a manner as is evidently best suited for the cutting of its food, as those on the side for grinding it to pieces? That the mouth, through which this food is conveyed, should be placed so near the nose and eyes as to prevent the passing unnoticed whatever is unfit for nourishment; while Nature, on the contrary, hath set at a distance and concealed from the senses all that might disgust or any way offend them? And canst thou still doubt, Aristodemus, whether a disposition of parts like this should be the work of chance, or of wisdom and contrivance?—I have no longer any doubt, replied Aristodemus; and, indeed, the more I consider it, the more evident it appears to me that man must be the master-piece of some great artificer; carrying along with it infinite marks of the love and favour of Him who hath thus formed it.

‘And what thinkest thou, Aristodemus, of that desire in the individual which leads to the continuance of the species? Of that tenderness and affection in the female towards her young, so necessary for its preservation? Of that unremitting love of life, and dread of dissolution, which take such strong possession of us from the moment we begin to be?—I think of them, answered Aristodemus, as so many regular operations of the same great and wise Artist, deliberately determining to preserve what he hath made.

‘But, farther (unless thou desirest to ask me questions), seeing, Aristodemus, thou thyself art conscious of reason and

intelligence, supposest thou there is no intelligence elsewhere? Thou knowest thy body to be a small part of that wide extended earth which thou everywhere beholdest: the moisture contained in it, thou also knowest to be a small portion of that mighty mass of waters, whereof seas themselves are but a part, while the rest of the elements contribute out of their abundance to thy formation. It is the soul then alone, that intellectual part of us, which is come to thee by some lucky chance, from I know not where. If so be there is indeed no intelligence elsewhere: and we must be forced to confess that this stupendous universe, with all the various bodies contained therein—equally amazing, whether we consider their magnitude or number, whatever their use, whatever their order—all have been produced, not by intelligence, but by chance!—It is with difficulty that I can suppose otherwise, returned Aristodemus; for I behold none of those Gods whom you speak of as making and governing all things; whereas I see the artists when at their work here among us.—Neither yet seest thou thy soul, Aristodemus, which, however, most assuredly governs thy body; although it may well seem, by thy manner of talking, that it is chance, and not reason, which governs thee.

‘I do not despise the Gods, said Aristodemus: on the contrary, I conceive so highly of their excellence, as to suppose they stand in no need either of me or of my services.—Thou mistakest the matter, Aristodemus; the greater magnificence they have shown in their care of thee, so much the more honour and service thou owest them.—Be assured, said Aristodemus, if I once could be persuaded the Gods take care of man, I should want no monitor to remind me of my duty.—And canst thou doubt, Aristodemus, if the Gods take care of man? Hath not the glorious privilege of walking upright been alone bestowed on him, whereby he may with the better advantage survey what is around him, contemplate with more ease those splendid objects which are above, and avoid the numerous ills and inconveniences which would otherwise befall him? Other animals indeed they have provided with

feet, by which they may remove from one place to another; but to man they have also given hands, with which he can form many things for his use, and make himself happier than creatures of any other kind. A tongue hath been bestowed on every other animal; but what animal, except man, hath the power of forming words with it, whereby to explain his thoughts, and make them intelligible to others?

‘But it is not with respect to the body alone that the Gods have shown themselves thus bountiful to man. Their most excellent gift is that soul they have infused into him, which so far surpasses what is elsewhere to be found; for by what animal, except man, is even the existence of those Gods discovered, who have produced and still uphold, in such regular order, this beautiful and stupendous frame of the universe? What other species of creature is to be found that can serve, that can adore them? What other animal is able, like man, to provide against the assaults of heat and cold, of thirst and hunger? that can lay up remedies for the time of sickness, and improve the strength nature has given by a well-proportioned exercise? that can receive like him information or instruction; or so happily keep in memory what he hath seen, and heard, and learnt? These things being so, who seeth not that man is, as it were, a God in the midst of this visible creation? so far doth he surpass, whether in the endowments of soul or body, all animals whatsoever that have been produced therein; for if the body of the ox had been joined to the mind of man, the acuteness of the latter would have stood him in small stead, while unable to execute the well-designed plan; nor would the human form have been of more use to the brute, so long as it remained destitute of understanding! But in thee, Aristodemus, hath been joined to a wonderful soul a body no less wonderful; and sayest thou, after this, the Gods take no thought for me? What wouldst thou then more to convince thee of their care?

‘I would they should send and inform me, said Aristodemus, what things I ought or ought not to do, in like manner as thou sayest they frequently do to thee.—And what

then, Aristodemus? supposest thou, that when the Gods give out some oracle to all the Athenians they mean it not for thee? If by their prodigies they declare aloud to all Greece, to all mankind, the things which shall befall them, are they dumb to thee alone? And art thou the only person whom they have placed beyond their care? Believest thou they would have wrought into the mind of man a persuasion of their being able to make him happy or miserable, if so be they had no such power? or would not even man himself, long ere this, have seen through the gross delusion? How is it, Aristodemus, thou rememberest or remarkest not, that the kingdoms and commonwealths most renowned as well for their wisdom as antiquity, are those whose piety and devotion hath been the most observable? and that even man himself is never so well disposed to serve the Deity as in that part of life when reason bears the greatest sway, and his judgment is supposed in its full strength and maturity? Consider, my Aristodemus, that the soul which resides in thy body can govern it at pleasure; why then may not the soul of the universe, which pervades and animates every part of it, govern it in like manner? If thine eye hath the power to take in many objects, and these placed at no small distance from it, marvel not if the eye of the Deity can at one glance comprehend the whole. And as thou perceivest it not beyond thy ability to extend thy care, at the same time, to the concerns of Athens, Egypt, Sicily, why thinkest thou, my Aristodemus, that the Providence of God may not easily extend itself through the whole universe?

‘As therefore, among men, we make best trial of the affection and gratitude of our neighbour by showing him kindness, and discover his wisdom by consulting him in his distress, do thou in like manner behave towards the Gods; and if thou wouldst experience what their wisdom and what their love, render thyself deserving the communication of some of those divine secrets which may not be penetrated by man, and are imparted to those alone who consult, who adore, who obey the Deity. Then shalt thou, my Aristodemus, understand

there is a Being whose eye pierceth throughout all nature, and whose ear is open to every sound; extended to all places, extending through all time; and whose bounty and care can know no other bound than those fixed by his own creation.

'By this discourse, and others of the like nature, Socrates taught his friends that they were not only to forbear whatever was impious, unjust, or unbecoming before man; but even when alone they ought to have a regard to all their actions, since the Gods have their eyes continually upon us, and none of our designs can be concealed from them.'*

To this passage we must add another equally deserving of attention:—

'Even among all those deities who so liberally bestow on us good things, not one of them maketh himself an object of our sight. And He who raised this whole universe, and still upholds the mighty frame, who perfected every part of it in beauty and in goodness, suffering none of these parts to decay through age, but renewing them daily with unfading vigour, whereby they are able to execute whatever he ordains with that readiness and precision which surpass man's imagination; even He, the supreme God, who performeth all these wonders, still holds himself invisible, and it is only in his works that we are capable of admiring him. For consider, my Euthydemus, the sun, which seemeth as it were set forth to the view of all men, yet suffereth not itself to be too curiously examined; punishing those with blindness who too rashly venture so to do; and those ministers of the Gods, whom they employ to execute their bidding, remain to us invisible; for though the thunderbolt is shot from on high, and breaketh in pieces whatever it findeth in its way, yet no one seeth it when it falls, when it strikes, or when it retires; neither are the winds discoverable to our sight, though we plainly behold the ravages they everywhere make, and with ease perceive what time they are rising. And if there be

* *Memorabilia*, i. 4.

anything in man, my Euthydemus, partaking of the divine nature, it must surely be the soul which governs and directs him; yet no one considers this as an object of his sight. Learn therefore not to despise those things which you cannot see; judge of the greatness of the power by the effects which are produced, and reverence the Deity.'*

In conclusion we must notice the vexed question of the Dæmon of Socrates. The notion most generally current is that he believed himself accompanied by a Dæmon, or Good Angel, who whispered counsels in his ear, and forewarned him on critical occasions. This has been adduced as evidence of his 'superstition;' and one writer makes it a text to prove that Socrates was mad.† Olympiodorus said that the Dæmon only meant Conscience, an explanation which, while it effaces the peculiar characteristics of the conception, is at the same time totally inapplicable to those cases when the 'Dæmonic voice' spoke to Socrates concerning the affairs of his friends, as we read in Plato's *Theages*. By other writers the Dæmon has been considered as purely allegorical.

The first point necessary to be distinctly understood is, that Socrates believed in no special Dæmon at all; and to translate Plutarch's treatise into *De Genio Socratis*, and hence to speak of *le démon de Socrate*, is gross misconception. Nowhere does Socrates, in Plato or Xenophon, speak of a genius or demon, but always of a *dæmonic something* (τὸ δαιμόνιον, δαιμόνιον τι), or of a *sign*, a *voice*, a *divine sign*, a *divine voice*.‡ The second point necessary to be remembered is, that this 'divine voice' was only an *occasional* manifestation, and

* *Memorabilia*, iv. 3.

† LÉLUT, *Du Démon de Socrate*, 1836. A new edition of this work appeared in 1856, and excited a 'sensation.'

‡ See passages cited in ZELLER, ii. 28. Mr. THOMPSON in his note to BUTLER, i. 375, says:—'Clemens Alexandrinus in one passage conjectures that the δαιμόνιον of Socrates may have been a familiar genius. *Strom.* v. p. 592. This conjecture becomes an assertion in LACTANTIUS (*Inst.* D. ii. 14), who converts the δαιμόνιον into *dæmon*. APULEIUS, it is true, had already led the way to this error in his treatise *De Deo Socratis*. It is adopted without scruple by AUGUSTINE and other Christian writers; and, as might have been expected, by FICINUS and the earlier moderns, as STANLEY and DACIER, in whose writings the δαιμόνιον appears full-fledged as 'an attendant spirit' or 'good angel.'

exercised only a *restraining* influence. On the great critical occasions of his life, if the voice warned him against any step he was about to take, he unhesitatingly obeyed it; if the voice was unheard, he concluded that his proposed step was agreeable to the Gods. Thus, when on his trial, he refused to prepare any defence, because when he was about to begin it the voice restrained him, whereupon he resigned himself to the trial, convinced that if it were the pleasure of the Gods that he should die, he ought in no wise to struggle—if it were their pleasure that he should be set free, defence on his part was needless.

This is his own explicit statement; and surely in a Christian country abounding in examples of persons believing in direct intimations from above, there can be little difficulty in crediting such a statement. Socrates was a profoundly religious man; he was moreover, as we learn from Aristotle, a man of that bilious melancholic temperament* which has in all times been observed in persons of unusual religious fervour, such as is implied in those momentary exaltations of the mind which are mistaken for divine visits; and when the rush of thought came upon him with strange warning voices, he believed it was the Gods who spoke directly to him. Unless we conceive Socrates as a profoundly religious man, we shall misconceive the whole spirit of his life and teaching. In many respects he was a fanatic, but only in the noble sense of the word: a man, like Carlyle, intolerant, vehement, 'possessed' by his ideas, but, like Carlyle, preserved from all the worst consequences of such intolerance and possession by an immense humour and a tender heart. His saturnine melancholy was relieved by laughter, which softened and humanized a spirit otherwise not less vehement than that of a Dominic or a Calvin. Thus strengthened and thus softened, Socrates stands out as one of the bravest, truest, wisest of mankind.

* Φύσιν μελαγχολικὴν, ARISTOTLE: *Problem.* 30.

FIFTH EPOCH.

Development of Ethics consequent on the Socratic circumscription of the aims of Philosophy.

CHAPTER I.

THE MEGARICS.

EUCLID.

THE companions of Socrates quitted Athens after his death: some of them followed Euclid to Megara.

'Several philosophers,' says Cicero, 'drew from the conversations of Socrates very different results; and, according as each adopted views which harmonized with his own, they in their turn became heads of philosophical schools all differing amongst each other.' It is one of the peculiarities of the Subjective Method, to adapt itself indiscriminately to all sorts of systems. The Objective Method is confined to one: if various and opposing systems spring from it, they are an erroneous or imperfect application of it.

We must not be surprised therefore to find many contradictory systems claiming the parentage of Socrates. But we must be on our guard against supposing that this adaptation to various systems is a proof of the excellence of the Socratic Method. It is only a proof of its vagueness. It may be accepted as a sign of the great influence exercised upon succeeding philosophers; it is no sign that the influence was in the right direction.

As we said, Socrates had no school; he taught no system. He exhibited a Method; and this Method his hearers

severally applied. Around him were men of various ages; various temperaments, and various opinions. He discoursed with each upon his own subject: with Xenophon on politics; with Theages or Theætetus on science; with Antisthenes on morals; with Ion on poetry. Some were convinced by him; others were merely refuted. The difference between the two is great. Of those who were convinced, the so-called Socratic Schools were formed; those who were only refuted became his enemies. But, of the former, some were naturally only more or less convinced; that is, were willing to adopt his opinions on some subjects, but remained stubborn on others. These are the imperfect Socratists. Among the latter was Euclid.

EUCLID, who must not be confounded with the great Mathematician, was born at Megara; date probably between 450 and 440 B.C. He had early imbibed a great love of philosophy, and had diligently studied the writings of Parmenides and the other Eleatics. From Zeno he acquired great facility in dialectics; and this continued to be his chief excellence, even after his acquaintance with Socrates, who reproved him for it as sophistical.

His delight in listening to Socrates was so great that he frequently exposed his life to do so. A decree was passed, in consequence of the enmity existing between Athens and Megara, that any inhabitant of Megara found in Athens should forfeit his life; Euclid, however, braved the penalty. He frequently came to Athens at night, disguised as a female. The distance was twenty miles. At the end of his journey he was recompensed by the fascinating conversation of Socrates; and he returned to meditate on the results of their arguments.

Brucker's supposition that a rupture was caused between them in consequence of Socrates having reproved Euclid's disputatious tendency, is wholly without foundation, and seems contradicted by the notorious fact that when, on the death of Socrates, Plato and the majority of the disciples retired to Megara, in fear of some popular outbreak of the

Athenians, who were in a state of rage against all the philosopher's friends, Euclid received them well. Bound by the same ties of friendship towards the illustrious martyr, and sharing some of his opinions, the Socratists made some stay in Megara. Differences however arose, as they will amongst all communities of the kind. Plato and some others returned to Athens as soon as the state of the public mind admitted their doing so with safety. The rest remained with Euclid.

Euclid agreed with the Eleatics in maintaining that there was but One unalterable Being, to be known by Reason only. This One Being was not simply *The One*; neither was it simply Intelligence; it was *The Good*. This One Being received various names according to its various aspects: thus it was sometimes Wisdom (*φρόνησις*); sometimes God (*θεός*); at others Reason (*νοῦς*); and so forth. This One Good (*ἐν τῷ ἀγαθῷ*) is the only Being that really *exists*; everything opposed to it has nothing but a phenomenal, transitory existence.

Such is the outline of his doctrine, as presented by Diogenes Laertius. In it the reader will have no difficulty in detecting both the Eleatic and Socratic elements. The conception of God as *τὸ ἀγαθόν*—the Good—is Socratic; and the denial of any existence to things opposed to the Good is an explanation of that passage in Plato's *Republic*, where Socrates declares God not to be the author of all things, but only of such as are good.*

The Megaric doctrine is therefore the Eleatic doctrine, with an Ethical tendency borrowed from Socrates, who taught that virtue was not any partial cultivation of the human mind, but constitutes the true and entire essence of the rational man, and indeed of the whole universe. The identification of Virtue with Wisdom is also Socratic.

With respect to Euclid's dialectics there is one point, often alluded to, variously interpreted, and which is in direct opposition to the Method of Socrates. In refuting his

* *Μὴ πάντων αἰτίων τὸν θεόν, ἀλλὰ τῶν ἀγαθῶν.*—ii. 100.

adversaries he did not attack the premisses, but the conclusion.* This is certainly not the manner of Socrates, who always managed to draw new conclusions from old premisses, and who, as Xenophon says, proceeded from the generally known to the less known. As if to mark this distinction more completely, we are told that Euclid rejected the analogical mode of reasoning (*τὸν διὰ παραβολῆς λόγον*). If, said he, the things compared are alike, it is better to confine the attention to that originally in question; if the things compared are unlike, there must be error in the conclusion. This precept strikes into the weakness of Socrates' method of induction; which was a species of analogical reasoning not of the highest order.

In dialectics therefore we see Euclid following out the Eleatic tendency, and carrying forward the speculations of Zeno. It was this portion of his doctrine that his immediate followers, Eubulides, Diodorus, and Alexinus, undertook to carry out. The Socratic element was further developed by Stilpo.

'The majority of the later members of the Megaric School,' says Ritter, 'are famous either for the refutation of opposite doctrines, or for the invention and application of certain fallacies; on which account they were occasionally called Eristici and Dialectici. Still it may be presumed that they did not employ these fallacies for the purposes of delusion, but of instructing rash and hasty thinkers, and exemplifying the superficial vanity of common opinion. At all events it is certain that they were mainly occupied with the forms of thought, more perhaps with a view to the discovery of particular rules, than to the foundation of a scientific system or method.'

* *DIOG. LAERT.* ii. 107. This is paraphrased by *ENFIELD* into the following contradictory statement:—'He judged that legitimate argumentation consists in deducing fair conclusions from acknowledged premisses.'—*Hist. of Phil.* i. 199.

CHAPTER II.

THE CYRENAICS.

ARISTIPPUS.

AMONG the 'imperfect Socratists' we must rank Aristippus, the founder of the Cyrenaic School, which borrowed its name from the birthplace of its founder—Cyrene, in Africa.

Aristippus was descended from wealthy and distinguished parents, and was consequently thrown into the vortex of luxurious debauchery which then characterized the colony of Minyæ. He came over to Greece to attend the Olympic games; there he heard so much of the wisdom of Socrates that he determined on listening to his enchanting discourse. He made Socrates an offer of a large sum of money, which, as usual, was declined. The great Talker did not accept money; but he willingly admitted Aristippus among the number of his disciples. It is commonly asserted that the pupil did not agree well with his master, and that his fondness for pleasure was offensive to Socrates. There is no good authority for such an assertion. He remained with Socrates until the execution of the latter; and there was no bond on either side to have prevented their separation as soon as they disagreed. The impression seems to have originated in the discussion reported by Xenophon,* wherein Aristippus expresses his political indifference, and Socrates, by an exaggerated extension of logic, endeavours to prove his views to be absurd. But this is simply a divergence of

* *Memorabilia*, ii. 1.

opinion, such as must have existed between Socrates and many of his followers. It merely shows that Aristippus thought for himself. Socrates with such men as Aristippus and Alcibiades reminds one of Dr. Johnson with the 'young bloods' Topham Beauclerk and Bennet Langton: he was wise enough and tolerant enough not to allow his virtue to be scandalized by their love of pleasure.

From Athens he went to Ægina, where he met with Laïs, the world-renowned courtesan, whom he accompanied to Corinth. On his way from Corinth to Asia he was shipwrecked on the island of Rhodes. On the sea-coast he discovered a geometrical diagram, and exclaimed, 'Take courage; I see here the footsteps of men.' On arriving at the principal town, he managed to procure for himself and friends a hospitable reception. He used to say, 'Send two men amongst strangers, and you will see the advantage of the philosopher.'

Aristippus was one of those

'Children of the Sun, whose blood is fire;'

but to strong sensual passions he united a calm regulative intellect. Prone to luxury, he avoided excess. Easy and careless in ordinary affairs, he had great dominion over his desires. Pleasure was his grand object in life; but he knew how to temper enjoyment with moderation. In disposition he was easy and yielding, a 'fellow of infinite mirth,' a philosopher whose brow was never 'sicklied o'er with the pale cast of thought.' He had none of that dignity which mistakes a stiff neck for healthy virtue. He had no sternness. Gay, brilliant, careless, and enjoying, he became the ornament and delight of the Court of Dionysius;—that Court already illustrious by the splendid genius of Plato and the rigid abstinence of Diogenes. The grave deportment of Plato and the savage virtue of Diogenes had less charm for the Tyrant than the easy gaiety of Aristippus, whose very vices were elegant. His ready wit was often put to the test. On one occasion three *hetærae* were presented for him to make a choice: he took them all

three, observing that it had been fatal even to Paris to make a choice. On another occasion, in a dispute with Æschines, who was becoming violent, he said, 'Let us give over. We have quarrelled, it is true, but I, as your senior, have a right to claim the *precedency in the reconciliation*.* In his old-age he appears to have returned to Cyrene, and there opened his school.

His philosophy, as Hegel remarks, takes its colour from his personality. So individual is it, that we should have passed it over entirely, had it not been a precursor of Epicureanism. Its relation to Socrates is also important.

In the only passage in which, as far as we know, Aristotle† mentions Aristippus, he speaks of him as a Sophist. What does this mean? Was he one of the professed Sophists? No. It means, we believe, that he shared the opinion of the Sophists respecting the uncertainty of Science. That he did share this opinion is evident from Sextus Empiricus,‡ who details his reasons: such as, that external objects make different impressions on different senses; the names which we impose on these objects express our sensations, but do not express the things; there is no *criterium* of truth; each judges according to his impressions; none judge correctly.

In so far he was a Sophist; but, as the disciple of Socrates, he learned that the *criterium* of truth must be sought within. He dismissed with contempt all physical speculations, as subjects beyond human comprehension, and concentrated his researches upon the moral constitution of man.

* Several of his repartees are recorded by LAERTIUS. We add the best of them:—Scinus, the treasurer of Dionysius, a man of low character but immense wealth, once showed Aristippus over his house. While he was expatiating on the splendour of every part, even to the floors, the philosopher spat in his face. Scinus was furious. 'Pardon me,' exclaimed Aristippus, 'there was no other place where I could have spat with decency.' One day, in interceding with the Tyrant for a friend, he threw himself on his knees. Being reproached for such want of dignity, he answered, 'Is it my fault if Dionysius has his ears in his feet?' One day he asked the Tyrant for some money. Dionysius made him own that a philosopher had no need of money. 'Give, give,' replied Aristippus, 'and we will settle the question at once.' Dionysius gave. 'Now,' said the philosopher, 'I have no need of money.'

† *Metaph.* iii. 2.

‡ *Adv. Math.* vii. 173.

In so far he was a Socratist. But, although he took his main direction from Socrates, yet his own individuality quickly turned him into bye-paths which his master would have shunned. His was not a scientific intellect. Logical deduction, which was the rigorous process of his master, suited neither his views nor his disposition. He was averse from abstract speculations. His tendency was directly towards the concrete. Hence, while Socrates was preaching about The Good, Aristippus wished to specify what it was; and resolved it into Pleasure. It was the pith and kernel of Socrates' Ethical system, that Happiness was the aim and desire of all men—the motor of all action; men only erred because of erroneous notions of what constituted Happiness. Thus the wise man alone knew that to endure an injury was better than to inflict it; he alone knew that immoderate gratification of the senses, being followed by misery, did not constitute Happiness, but the contrary. Aristippus thought this too vague. He not only reduced this general idea to a more specific one, namely, Pleasure; he endeavoured to show how truth had its only *criterium* in the sensation of pleasure or of pain. Of that which is without us we can know nothing truly; we only know through our senses, and our senses deceive us with respect to objects. But our senses do not deceive us with respect to our sensations. We may not perceive things truly; but it is true that we perceive. We may doubt respecting external objects; we cannot doubt respecting our sensations. Amongst those sensations we naturally seek the repetition of such as are pleasurable, and shun those that are painful.

Pleasure, then, as the only positive good, and as the only positive test of what was good, he declared to be the end of life; but, inasmuch as for constant pleasure the soul must preserve its dominion over desires, this pleasure was only another form of the Socratic temperance. It is distinguished from the Socratic conception of Pleasure, however, in being positive, and not merely the gratification of a want. In the *Phædo*, Socrates, on being released from his chains, reflects

upon the intimate connection of pleasure and pain; and calls the absence of pain pleasure. Aristippus, on the contrary, taught that pleasure is not the mere removal of pain: they are both positive emotions; non-pleasure and non-pain are not emotions, but as it were the sleep of the soul.*

In the application of this doctrine to ethics, Aristippus betrays both his Sophistic and Socratic education. With the Sophists he regarded pleasure and pain as the proper *criteria* of actions; no action being in itself either good or bad, but only such according to convention. With Socrates, however, he regarded the advantages acquired by injustice to be trifling; whereas the evils and apprehensions of punishment are considerable; and pleasure was the result, not of individual prosperity alone, but of the welfare of the whole State.

In reviewing the philosophy, such as it was, of Aristippus, we cannot fail to be struck with the manifest influence of Socrates; although his method was not followed, we see the ethical tendency predominating. In the Megaric School the abstract idea of The Good (*τὸ ἀγαθόν*) of Socrates, was grounded on the Eleatic conception of The One. In the Cyrenaic, the abstract conception was reduced to the concrete, Pleasure; and this became the only ground of certitude, and morals the only science. In the Cynic School we shall see a still further development in this direction.

* *Diog. Laert.* ii. 89.

CHAPTER III.

THE CYNICS.

ANTISTHENES AND DIOGENES.

CYNICISM imposed on antiquity as it has imposed on many modern imaginations, by the energy of its self-denials; but it is a 'blasphemy against the divine beauty of life,' blasphemy against the divinity of man. To lead the life of a dog is *not* the ideal for man.

Nevertheless there were some points both in the characters and doctrines of the founders of this School which may justly claim the admiration of mankind. Their contemporaries regarded them with feelings mingled with awe. We at least may pay a tribute to their energy.

Antisthenes was born at Athens, of a Phrygian mother. In early life he distinguished himself at the battle of Tanagra. After this he studied under Gorgias, the Sophist, and established a school for himself; but, captivated by the practical wisdom of Socrates, he ceased to teach, and became once more a pupil; nay more, he persuaded all his pupils to come with him to Socrates, and there learn true wisdom. This is genuine modesty, such as philosophers have rarely exhibited. He was then somewhat advanced in life; his opinions on many points were too deeply rooted to be exchanged for others; but the tendency of the Socratic philosophy towards Ethics, and the character of that system as leading to the moral perfection of man, seemed entirely to captivate him. It will be remembered that Socrates did not teach positive doctrines; he enabled each earnest thinker to evolve a doctrine for himself. All Socrates did, was to give an impulsion in a

certain direction, and to furnish a certain Method. His real disciples accepted the Method; his imperfect disciples only accepted the impulsion. Antisthenes was of the latter. Accordingly, his system was essentially personal. He was stern, and his doctrine was rigid; he was proud, and his doctrine was haughty; he was cold, and his doctrine was unsympathizing and self-isolating; he was brave, and his doctrine was a battle. The effeminacy of the luxurious he despised; the baseness of courtiers and flatterers he hated. He worshipped Virtue; but it was Virtue sometimes ferocious and unbending.

Even whilst with Socrates he displayed his contempt of ordinary usages, and his pride in differing from other men. He used to appear in a threadbare cloak, with ostentatious poverty. Socrates saw through it all, and exclaimed, 'I see your vanity, Antisthenes, peering through holes in your cloak!' How different was this from Socrates! He, too, had inured himself to poverty, to heat and to cold, in order that he might bear the chances of fortune; but he made no virtue of being ragged, hungry, and cold. Antisthenes thought he could only preserve his virtue by becoming a savage. He wore no garment except a coarse cloak; allowed his beard to grow; carried a wallet and a staff; and renounced all diet but the simplest. His manners corresponded to his appearance. Stern, reproachful, and bitter in his language; careless and indecent in his gestures. His contempt of all sensual enjoyment was expressed in his saying, 'I would rather be mad than sensual!'

On the death of Socrates he formed a school, and chose for his place of meeting a public place in that quarter of Athens called the Cynosarges, from which some say the sect of Cynics derives its name; others derive it from the snarling propensities of the founder, who was frequently called 'The Dog.' As he grew old, his gloomy temper became morose;

* It is thus we would interpret *DIOG. LAERT. vi. 3*:—*Μαίνειν μᾶλλον ἢ ἡσθεῖν*. RITTER gives this version:—'I had rather go mad than experience pleasure;' which is an outrageous sentiment.

he became so insupportable that all his scholars left him, except Diogenes of Sinope, who was with him at his death. In his last agony, Diogenes asked him whether he needed a friend. 'Will a friend release me from this pain?' he replied. Diogenes gave him a dagger, saying, 'This will.' 'I wish to be freed from pain, not from life,' was the reply.

The contempt he uniformly expressed for mankind may be read in two of his sayings. Being asked, what was the peculiar advantage to be derived from philosophy, he answered, 'It enables me to keep company with myself.' Being told that he was greatly praised by many, 'Have I done anything *wrong*, then, that I am praised?' he asked.*

DIOGENES of Sinope is generally remembered as the representative of Cynicism; probably because more anecdotes of his life have descended to us. He was the son of a banker at Sinope, who was convicted of debasing the coin; an affair in which the son was also supposed to have been implicated. Diogenes fled to Athens. From the heights of splendour and extravagance, he found himself reduced to squalid poverty. The magnificence of poverty, which Antisthenes proclaimed,† attracted him. Poor, he was ready to embrace the philosophy of poverty; an outcast, he was ready to isolate himself from society; branded with disgrace, he was ready to shelter himself under a philosophy which branded all society. Having in his own person experienced how little wealth and luxury can do for the happiness of man, he was the more inclined to try the converse; having experienced how wealth prompts to vice, and how desires generate desires, he was willing to try the efficacy of poverty and virtue. He went to Antisthenes; was refused. He continued to offer himself to the Cynic as a scholar; the Cynic raised his knotty staff, and threatened to strike him if he did not depart. 'Strike!' replied Diogenes; 'you will not find

* DR. ENFIELD, who generally manages to introduce some blunder into every page, has spoiled this repartee, by giving it as a reply to the praise of a *bad* man. Yet the language of Diogenes Laertius is very explicit:—Πολλοί σε ἐπακινούσι (vi. 8).

† See XENOPHON: *Banquet*.

a stick hard enough to conquer my perseverance.' Antisthenes, overcome, accepted him as a pupil.

To live a life of virtue was henceforward his sole aim. That virtue was Cynicism. It consisted in the complete renunciation of all luxury—the subjugation of all sensual desires. It was a war carried on by the Mind against the Body. As with the Ascetics of a later day, the basis of a pure life was thought to be the annihilation of the Body; the nearer any one approached to such a suicide, the nearer he was to the ideal of virtue. The Body was vile, filthy, degraded, and degrading; it was the curse of man; it was the clog upon the free development of Mind; it was wrestled with, hated, and despised. This beautiful Body, so richly endowed for enjoyment, was regarded as the 'sink of all iniquity.'

Accordingly, Diogenes limited his desires to necessities. He ate little; and what he ate was of the coarsest. He tried to live upon raw meat and unboiled vegetables; but failed. His dress consisted solely of a cloak: when he asked Antisthenes for a shirt, he was told to fold his cloak in two; he did so. A wallet and a huge stick completed his accoutrements. Seeing a little boy drinking water out of his scooped hand, he threw away his cup, declaring it superfluous. He slept under the marble porticoes of the buildings, or in his celebrated Tub, which was his place of residence. He took his meals in public. In public he performed all those actions which decency has condemned to privacy. Decency of every kind he studiously outraged. It was a part of his system to do so. Everything, not in itself improper, ought, he said, to be performed publicly. Besides, he was wont to annoy people with indecent gestures; had he a philosophical reason for that also?

Doubts have been expressed respecting his Tub, which, it is thought, was only an occasional residence, and used by him as expressive of his contempt for luxury. We incline, however, to the tradition. It is in keeping with all we know

of the man; and that a Tub could suffice for a domicile we may guess from Aristophanes.*

It is not difficult to imagine the effect created by the Cynics in the gay, luxurious city of Athens. There the climate, no less than the prevailing manners, incited every one to enjoyment. The Cynics told them that enjoyment was unworthy of men; that there were higher and purer things for man to seek. To the polished elegance of Athenian manners the Cynics opposed the most brutal coarseness they could assume. To the friendly flatteries of conversation they opposed the bitterest pungencies of malevolent frankness. They despised all men; and told them so.

Now, although we cannot but regard Cynicism as a very preposterous doctrine—as a feeble solution of the great problem of morals, and not a very amiable feebleness—we admit that it required some great qualities in its upholders. It required a great rude energy; a fanatical logicity of mind; a power over self,—narrow it may be, but still a power. These qualities are not common qualities, and therefore they command respect. Any deviation from the beaten path implies a certain resolution; a steady and consistent deviation implies force. All men respect force. The power of subjugating ordinary desires to one remote but calculated end, always impresses men with a sense of unusual power. Few are aware that to *regulate* desires is more difficult than to *subjugate* them—requires greater power of mind, greater will, greater constancy. Yet every one knows that abstinence is easier than temperance: on the same principle, it is easier to be a Cynic than a wise and virtuous Epicurean.

That which prevents our feeling the respect for the Cynics which the ancients seem to have felt, and which, indeed, some portions of the Cynical doctrine would otherwise induce us to feel, is the studious and uncalled-for outrages on common decency and humanity which Diogenes,

* *Knights*, 793: the people are there spoken of as having been forced to live, during the war, in 'pigeon-holes and corners of turrets': γυπαρίσσις καὶ πυργιδίσις; unless, indeed, this is purely a metaphorical expression.

especially, perpetrated. All the anecdotes that have come down to us seem to reveal a snarling and malevolent spirit, worshipping Virtue only because it was opposed to the vices of contemporaries; taking a pride in poverty and simplicity only because others sought wealth and luxury. It may be well to raise an earnest protest against the vices of one's age; but it is not well to bring virtue into discredit by the manner of the protest. Doubtless the Athenians needed reproof and reformation, and some exaggeration on the opposite side might have been allowed to the reformers. But Diogenes was so feeble in doctrine, so brutal in manner, that we doubt whether the debauchery of the first profligate in that profligate city were more reprehensible than the debauchery of pride which disgraced the Cynic. The whole character of the man is exhibited in one anecdote. Plato had given a splendid entertainment to some friends. Diogenes entered, unbidden, and stamping on the rich carpets, said, 'Thus I trample on the pride of Plato;' whereupon Plato admirably replied, 'With greater pride, O Diogenes.'

Diogenes, doubtless, practised great abstinence. He made a virtue of his necessity; and, being poor, resolved to be ostentatiously poor. The ostentation, being novel, was mistaken for something greater than it was; being in contradiction to the universal tendency of his contemporaries, it was supposed to spring from higher motives. There are men who bear poverty meekly; there are men who look upon wealth without envy, certain that wealth does not give happiness; there are men whose souls are so fixed on higher things as utterly to disregard the pomps and shows of the world; but none of these *despise* wealth, they *disregard* it; none of these *display* their feelings, they are content to act upon them. The virtue which is loud, noisy, ostentatious, and self-affirmative, looks very like an obtrusive egoism. And this was the virtue of the Cynics. Pretending to reform mankind, it began by blaspheming humanity; pretending to correct the effeminacies of the age, it studiously outraged all

the decencies of life. Eluding the real difficulty of the problem, it pretended to solve it by unabashed insolence.

In his old-age Diogenes was taken captive by pirates, who carried him to Crete, and exposed him for sale as a slave. On being asked what he could do, he replied, 'Govern men: sell me, therefore, to one who wants a master.' Xeniaades, a wealthy Corinthian, struck with this reply, purchased him, and, on returning to Corinth, gave him his liberty and consigned his children to his education. The children were taught to be Cynics, much to their own satisfaction. It was during this period that his world-renowned interview with Alexander took place. The prince, surprised at not seeing Diogenes joining the crowd of his flatterers, went to see him. He found the Cynic sitting in his tub, basking in the sun. 'I am Alexander the Great,' said he. 'I am Diogenes the Cynic,' was the reply. Alexander then asked him if there was anything he could do for him. 'Yes, stand aside from between me and the sun.' Surprised at such indifference to princely favour—an indifference so strikingly contrasted with everything he could hitherto have witnessed—he exclaimed, 'Were I not Alexander, I would be Diogenes!' One day, being brought before the King, and being asked who he was, Diogenes replied, 'A spy on your cupidity;' language, the boldness of which must have gained him universal admiration, because implying great singularity as well as force of character.

Singularity and Insolence may be regarded as his grand characteristics. Both of these are exemplified in the anecdote of his lighting a lamp in the daytime, and peering about the streets as if earnestly seeking something: being asked what he sought, he replied, 'A Man.' The point of this story is lost in the usual version, which makes him seek 'an honest man.' The words in Laertius are simply, *ἀνθρώπου ζητῶ*—'I seek a man.' Diogenes did not seek honesty; he wanted to find a Man, in whom honesty would be included with many other qualities. It was his constant reproach to his contemporaries, that they had no manhood. He said he had

never seen men; at Sparta he had seen children; at Athens, women. One day he called out, 'Approach, all men!' When some approached, he beat them back with his club, saying, 'I called for men; ye are excrements.'

Thus he lived till his ninetieth year, bitter, brutal, ostentatious, and abstemious; disgracing the title of 'The Dog' (for a dog has affection, gratitude, sympathy, and caressing manners), yet growling over his unenvied virtue as a cur growls over his meatless bone, for ever snarling and snapping without occasion; an object of universal attention, and, from many quarters, of unfeigned admiration. One day his friends went to see him. On arriving at the portico under which he was wont to sleep, they found him still lying on the ground wrapped in his cloak. He seemed to sleep. They pushed aside the folds of his cloak: he was dead.*

The Doctrine of the Cynics may be briefly expounded. Antisthenes, as the disciple of Gorgias, was imbued with the sophistical principles respecting Science; principles which his acquaintance with Socrates did not alter. He maintained that Science was impossible. He utterly rejected the Socratic notion of Definitions. He said that a Definition was nothing but a *series of words* (*λόγον μακρόν*, 'a long discourse'); for which Aristotle calls him an ignoramus.† To the Socratic notion of a Definition, as including the essence of a thing, he opposed the Sophistic notion of a Definition, as expressing a purely subjective relation. You can only express qualities, not essences; you can call a thing silver, but you cannot say in what it consists. Your definition is only verbal: hence the first step in education should be the study of words.‡

What was the consequence of this scepticism? The consequence was, that the Cynics answered arguments by facts.

* It was thought that he had committed suicide by holding his breath—a physiological impossibility. Other versions of the cause of his death were current in antiquity; one of them seems consistent with his character: it makes him die in consequence of devouring a neat's foot raw.

† *Ἀναίδευτος*.—*Metaph.* viii. 3.

‡ ARRIAN, *Epictet.*, Diss. i. 17, quoted in RITTER and PRELLER, *Hist. Philos. Græco-Romanæ ex fontium locis contexta* (Hamburg, 1838), p. 174.

When some one was arguing in support of Zeno of Elea's notion respecting the impossibility of movement, Diogenes rose and walked. Definitions might prove that there was no motion; but definitions were only verbal, and could be answered by facts.

This refuge found in common-sense against the assaults of logic, enabled the Cynics to shape a doctrine of morals which had some certain basis. As they answered arguments by facts, so they made actions take the place of precepts. Instead of speculating about virtue, they endeavoured to be virtuous. Socrates had brought philosophy from the clouds; the Cynics endeavoured to bring it into daily practice. Their personal dispositions gave the peculiar colouring to their doctrine, as that of Aristippus had done to the Cyrenaic.

SIXTH EPOCH.

Restoration of Philosophy to its widest Aims—Attempts to follow up the Negative Dialectics of Socrates with an affirmative solution of the chief problems—The necessity for a Criterion of Philosophy becomes for the first time distinctly recognised—The answer to this question gives a logical basis to the Subjective Method.

CHAPTER I.

LIFE OF PLATO.

‘WITH Plato Philosophy begins to be a science,’ says Hegel*—a statement which may be questioned, as may almost every other statement that can be made about Plato; for, singularly enough, although he is the first of the early thinkers whose writings have floated down to us from the great wreck of Grecian literature, although these writings are both extensive and well authenticated, and although the immense celebrity of his name has never suffered an eclipse, there is scarcely a single point in his teaching which is not open to critical question, and which has not been alternately affirmed and denied by competent critics. If among Platonic students the diversities of opinion are important and incessant, we need not be surprised to find the opinions current in general literature absurdly wide of the truth. A certain

* HEGEL, *Gesch. d. Phil.* ii, 169.

mythical reverence surrounds his name. No ancient is more frequently invoked by men who have never looked into one of the dialogues, and by men who would understand very little if they did look. Writers in search of a label for some vapoury rhetoric of their own are fond of finding one in Plato, 'the great Idealist.' Theologians and metaphysicians, more anxious about authorities than reasons, refer with peculiar complacency to Plato as the 'eloquent advocate' of the immateriality and immortality of the soul, never troubling themselves with the consideration that the ideas of Plato on the soul were such as if openly stated they would indignantly reject.

It requires but a slight acquaintance with his writings to discover that although the cast of his mind was such that only the highest subjects had interest for him (and the highest subjects naturally ally themselves with poetry), yet in his philosophical efforts he was not actuated by a desire to flatter the sensibilities of his audience, but to shatter their false illusions by a severe logic. He wrote poetry in his youth; in mature age he wrote vehemently against it. In his dialogues he appears anything but 'dreamy;' anything but 'an Idealist,' as that phrase is usually understood. He is an inveterate dialectician, a severe and abstract thinker, and a great sophist. His metaphysics are of a nature so abstract and so subtle that they frighten away all but the most determined students. His views on morals and politics, so far from having any romantic tinge, are the *ne plus ultra* of logical severity: hard, uncompromising, and above humanity. He had learned to look upon human passion as a disease, and human pleasure as a frivolity. The only thing worth living for was truth. Dialectics was the noblest exercise of humanity.

Even the current notions respecting his style are erroneous. It is not a 'poetical' metaphorical style. It has unmis-takable beauties, but not the beauties popularly attributed to it. Its power is dramatic power, though that is overpraised. The best dialogues contain some excellent scenes of comedy, though no sooner does the argumentation begin than all

this dramatic *vis* disappears. Character, banter, irony, and animation are there, but scarcely any imagery, and that seldom beautiful.* His object was to refute or to convince; his illustrations are therefore homely. When fit occasion arrives he can be eloquent and poetical. He clothes some myths in language of splendid beauty; and there are many felicitous passages scattered through the dreary waste of dialectical quibbling and obscurity. These passages have been quoted by various writers; and general readers have supposed that Plato always wrote thus felicitously.

I do not expect that a judgment of Plato so opposed to the traditional admiration of his style will be generally accepted. I can only say that such is the opinion I have formed, and that I came to it through study of the works, having commenced, and for a long while continued, the study under the bias of tradition. With regard to the dramatic power exhibited, there has perhaps been little exaggeration in the praises of critics; but there has been an oversight in regard to the sudden cessation of the dramatic ventriloquence (so to speak), which having animated the *mise en scène* of the characters, disappears as soon as the business of the dialogue begins. In the introductions the characters speak; in the argument it is Plato who speaks just what the needs of his argument require, and the debaters, instead of debating, assent, enquire, and expound, but rarely speak dramatically.

Aristocles, surnamed Plato (the broad-browed),† was the

* 'Even upon abstract subjects, whether moral, metaphysical, or mathematical, the language of Plato is clear as the running stream; and in simplicity and sweetness vies with the humble violet which perfumes the vale.'—ENFIELD, *Hist. of Phil.* ii. 221. Whenever you meet with such trash as this, be dubious that the writer of it ever read Plato. ARISTOTLE capitally describes Plato's style as 'a middle species of diction between verse and prose.' It has rhythm rather than imagery.

† Some writers incline to the opinion that 'Plato' was the epithet of broad-browed; others of broad-shouldered; others, again, that it was expressive of the breadth of his style. This last is absurd. The author of the article *Plato* in the *Penny Cyclopædia* pronounces all the above explanations to be 'idle, as the name of Plato was of common occurrence among the Athenians of that time.' But surely Aristocles was not endowed with this surname of Plato without cause? Unless he derived the name from a relation, he may have derived it from one of the above causes.

son of Ariston and Perictione, was born at Athens or Ægina, on the 7th Thargelion (about the middle of May), B. C. 427. His childhood and youth consequently synchronize with the Peloponnesian war, the most active and brilliant period of Grecian thought and action. His lineage was illustrious: on the maternal side he was connected with Solon.

So great a name could not escape becoming the nucleus of many fables, and we find the later historians gravely repeating various miraculous events connected with him. He was said to be the child of Apollo, his mother a virgin. Ariston, though betrothed to Perictione, delayed his marriage, because Apollo had appeared to him in a dream, and told him that she was with child.

Plato's education was excellent; and in gymnastics he was sufficiently skilled to contend at the Pythian and Isthmian games. Like a true Greek, he attached extreme importance to gymnastics, as doing for the body what dialectics did for the mind; and, like a true Greek, he did not suffer these exercises to absorb his chief time and attention: poetry, music, and rhetoric were assiduously cultivated, and with some success. He wrote an epic poem, besides some tragedies, dithyrambics, lyrics, and epigrams. The epic he is said to have burned in a fit of despair on comparing it with Homer. The tragedies he burned on becoming acquainted with Socrates. Some of the epigrams have been preserved. One of them is very pretty:—

*Ἀστέρᾱς εἰσαθρεῖς, ἀστὴρ ἐμός· εἶθε γένοιμην
Οὐρανός, ὥς πολλοῖς ὄμμασιν εἰς σε βλέπω.*

Thou gazest on the stars; ah! would I were the skies,
That I might gaze on thee with all my thousand eyes!

His studies of poetry were mingled with those of philosophy, which he must have cultivated early; for we know that he was only twenty when he first went to Socrates, and we also know that he had been taught by Cratylus before he knew Socrates. Early he must have felt

*A presence that disturbed him with the joy
Of elevated thoughts; a sense sublime*

*Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the round ocean, and the living air,
And the blue sky, and in the mind of man:
A motion and a spirit that impels
All thinking things, all objects of all thought,
And rolls through all things.*

A deep and meditative spirit led him to question Nature. The sombre philosophy of Heraclitus suited well with his melancholy youth. Scepticism, which was the product of that age, had seized on Plato as on all the rest. This scepticism, together with an imperious craving for belief which struggled with the scepticism, found breathing-room in the doctrines of Socrates; and the young scholar learned that without impugning the justice of his doubts, he could escape them by seeking Truth elsewhere.

'But though Plato,' says Mr. Grote, 'may have commenced at the age of twenty his acquaintance with Sokrates, he cannot have been exclusively occupied in philosophical pursuits between the nineteenth and the twenty-fifth year of his age—that is, between 409–403 B.C. He was carried, partly by his own dispositions, to other matters besides philosophy: and even if such dispositions had not existed, the exigencies of the time pressed upon him imperatively as an Athenian citizen. Even under ordinary circumstances, a young Athenian of eighteen years of age, as soon as he was enrolled on the public register of citizens, was required to take the memorable military oath in the chapel of Aglaurus, and to serve on active duty, constant or nearly constant, for two years, in various posts throughout Attica, for the defence of the country. But the six years from 409–403 B.C. were years of an extraordinary character. They included the most strenuous public efforts, the severest suffering, and the gravest political revolution, that had ever occurred at Athens. Every Athenian citizen was of necessity put upon constant (almost daily) military service; either abroad, or in Attica against the Lacedæmonian garrison established in the permanent fortified post of Dekeleia, within sight of the

Athenian Acropolis. So habitually were the citizens obliged to be on guard, that Athens, according to Thucydides, became a military post rather than a city. It is probable that Plato, by his family and its place on the census, belonged to the Athenian Hippeis or Horsemen, who were in constant employment for the defence of the territory. But at any rate, either on horseback, or on foot, or on shipboard, a robust young citizen like Plato, whose military age commenced in 409, must have borne his fair share in this hard but indispensable duty. In the desperate emergency, which preceded the battle of Arginusæ (406 B.C.), the Athenians put to sea in thirty days a fleet of 110 triremes for the relief of Mitylene; all the men of military age, freemen, and slaves, embarking. We can hardly imagine that at such a season Plato can have wished to decline service: even if he had wished it, the Strategi would not have permitted him. Assuming that he remained at home, the garrison-duty at Athens must have been doubled on account of the number of departures. After the crushing defeat of the Athenians at Ægospotami, came the terrible apprehension at Athens, then the long blockade and famine of the city (wherein many died of hunger); next the tyranny of the Thirty, who among their other oppressions made war upon all free speech, and silenced even the voice of Sokrates: then the gallant combat of Thrasybulus followed by the intervention of the Lacedæmonians—contingencies full of uncertainty and terror, but ending in the restoration of the democracy. After such restoration, there followed all the anxieties, perils of reaction, new enactments and provisions, required for the revived democracy, during the four years between the expulsion of the Thirty and the death of Sokrates.

‘From the dangers, fatigues, and sufferings of such an historical decad, no Athenian citizen could escape, whatever might be his feeling towards the existing democracy, or however averse he might be to public employment by natural temper. But Plato was not thus averse, during the earlier years of his adult life. We know, from his own letters, that

he then felt strongly the impulse of political ambition usual with young Athenians of good family; though probably not with any such premature vehemence as his younger brother Glaukon, whose impatience Sokrates is reported to have so judiciously moderated. Whether Plato ever spoke with success in the public assembly, we do not know: he is said to have been shy by nature, and his voice was thin and feeble, ill adapted for the Pnyx. However, when the oligarchy of Thirty was established, after the capture and subjugation of Athens, Plato was not only relieved from the necessity of addressing the assembled people, but also obtained additional facilities for rising into political influence, through Kritias (his near relative) and Charmides, leading men among the new oligarchy. Plato affirms that he had always disapproved the antecedent democracy, and that he entered on the new scheme of government with full hope of seeing justice and wisdom predominant. He was soon undeceived. The government of the Thirty proved a sanguinary and rapacious tyranny, filling him with disappointment and disgust. He was especially revolted by their treatment of Sokrates, whom they not only interdicted from continuing his habitual colloquy with young men, but even tried to implicate in nefarious murders, by ordering him along with others to arrest Leon the Salaminian, one of their intended victims: an order which Sokrates, at the peril of his life, disobeyed.

‘Thus mortified and disappointed, Plato withdrew from public functions.’

He remained with Sokrates ten years, and was separated from him only by death. He attended his beloved master during the trial; undertook to plead his cause: indeed, began a speech which the violence of the judges would not allow him to continue; and pressed his master to accept a sum of money sufficient to purchase his life.

On the death of Sokrates he went to Megara to visit Euclid, as we mentioned before. From thence he proceeded to Cyrene, where he was instructed in mathematics by Theodorus, whom he had known in Athens, if we may credit the

Theætetus, where Theodorus is represented discoursing with Socrates. From Cyrene he went to Egypt, in company, it is said, with Euripides. There is very little authority for this visit, and that Euripides was his companion is not very probable, because Euripides had been dead some years. The influence of Egypt on Plato has certainly been exaggerated. There is no trace, in his works, of Egyptian research. 'All he tells us of Egypt indicates at most a very scanty acquaintance with the subject; and although he praises the industry of the priests, his estimate of their scientific attainments is far from favourable.*

In these travels the broad-browed meditative man greatly enlarged the Socratic doctrine, and indeed introduced antagonistic elements. But he strictly preserved the Socratic Method. 'Whilst studious youth,' says Valerius Maximus, 'were crowding to Athens from every quarter in search of Plato for their master, that philosopher was wandering along the winding banks of the Nile, or the vast plains of a barbarous country, himself a disciple to the old men of Egypt.'

He returned at last, B. C. 386, and eager scholars flocked around him. With a mind richly stored by foreign travel and constant meditation, he began to emulate his beloved master, and devote himself to teaching.

He had acquired a small house and garden near the Academy, or garden adjoining the sacred precinct of Hecademus, about a mile from Athens on the road to Eleusis. Here there were shady walks and a gymnasium. Here was founded that celebrated school of philosophy which for centuries has been known as that of the Academy.

The longing thoughts of posterity have often hovered round it as the centre of myriad associations. Poets have sung of it. Philosophers have sighed for it.

See there the olive grove of Academe,
Plato's retirement, where the Attic bird
Thrills her thick-warbled notes the summer long.

* RITTER, ii. 147.

In such a spot where the sound

Of bees' industrious murmur oft invites
To studious musing,

one would imagine none but the Graces could enter; and coupling this with the poetical beauties of Plato's *Dialogues*, people have supposed that the lessons in the Academy were magnificent outbursts of eloquence and imagery upon philosophical subjects.

Nothing can be farther from the truth. The lectures were hard exercises of the thinking faculty, and demanded great power of continued abstraction. Whatever graces might have adorned Plato's compositions, his lectures were not literary, but dialectical exercises which were severe trials to the capacities of students; and their purely argumentative nature may have originated the story respecting the inscription over the door of his Academy, '*Let none but Geometricians enter here*;' a story which is very widely circulated, although wholly without good evidence.* The story is in direct contradiction to Plato's views of Geometry, which he excludes from Philosophy, because it assumes its axioms without proof, and because it occupies a middle position between Opinion and Philosophy, more accurate than the one, but less certain than the other.†

Though Plato demanded no money as fee for admission of pupils, yet neither did he scruple to receive presents from rich men such as Dionysius, Dion, and others. In the jests of Ephippus, Antiphanes, and other poets of the middle comedy, the pupils of Plato in the Academy are described as finely and delicately clad, nice in their persons even to affectation, with elegant caps and canes; which is the more to be

* Mr. THOMPSON says the only authorities for the inscription are PHILOPONUS, in his Commentary on Aristotle, *De Animâ*, and a verse in the *Chiliads* of TZETZES. See Notes to *Butler's Lectures*, ii. 79.

† I have been unable to recover a passage in the *Republic* where PLATO expresses himself as in the text, but I found this, which approximates to it, although not the passage I had in my mind. See *Repub.* vi. towards the end, beginning, *Μανθάνω, ἔφη, κ.τ.λ.* . . . and ending, *διάνοιαν δὲ καλεῖν μοι δοκεῖς τὴν τῶν γεωμετρικῶν τε καὶ τῶν τοιούτων ἔξιν, ἀλλ' οὐ νοῦν, ὡς μεταξύ τι δόξης τε καὶ νοῦ τὴν διάνοιαν οὖσαν.*

noticed because the preceding comic poets derided Sokrates and his companions for qualities the very opposite—as prosing beggars, in mean attire and dirt. Such students must have belonged to opulent families; and we may be sure that they requited their master by some valuable present, though no fee may have been formally demanded from them. Some conditions (though we do not know what) were doubtless required for admission. Moreover the example of Eudoxus shows that in some cases even ardent and promising pupils were practically repelled. At any rate, the teaching of Plato formed a marked contrast with that extreme and indiscriminate publicity which characterised the conversation of Sokrates, who passed his days in the market-place or in the public porticoes or palæstræ; while Plato both dwelt and discoursed in a quiet residence and garden a little way out of Athens.’

In his fortieth year Plato made his first visit to Sicily. It was then he became acquainted with Dionysius I., the Tyrant of Syracuse, Dion, his brother-in-law, and Dionysius II. With Dionysius I. he soon came to a rupture, owing to his political opinions; and he so offended the Tyrant, that his life was threatened. Dion however interceded for him; and the Tyrant spared his life, but commissioned Pollis, the Spartan Ambassador, in whose ship Plato was to return, to sell him as a slave. He was sold accordingly. Anniceris of Cyrene bought him, and immediately set him free. On his return to Athens, Dionysius wrote, hoping that he would not speak ill of him. Plato contemptuously replied, that he had not ‘leisure to think of Dionysius.’

Plato’s second visit to Syracuse was after the death of Dionysius I., and with the hope of obtaining from Dionysius II. the establishment of a colony according to laws framed by himself. The colony was promised; but never granted. Plato incurred the Tyrant’s suspicions of having been concerned in Dion’s conspiracy; but he was allowed to return home in peace.

He paid a third visit; and this time solely to endeavour

to reconcile Dionysius with his uncle Dion. Finding his efforts fruitless, and perhaps dangerous, he returned.

In the calm retirement of the Academy, Plato passed the remainder of his days. Lecturing and writing were his chief occupations. The composition of those dialogues which have been the admiration of posterity, was the cheering solace of his life, especially of his declining years. He died at the advanced age of eighty-three.

‘The latter half of Plato’s life in his native city must,’ says Mr. Grote, ‘have been one of dignity and consideration, though not of any political activity. He is said to have addressed the Dikastery as an advocate for the accused general Chabrias: and we are told that he discharged the expensive and showy functions of Choregus, with funds supplied by Dion. Out of Athens also his reputation was very great. When he went to the Olympic festival of B. C. 360, he was an object of conspicuous attention and respect: he was visited by hearers, young men of rank and ambition, from the most distant Hellenic cities; and his advice was respectfully invoked both by Perdikkas in Macedonia and by Dionysius II. at Syracuse. During his last visit to Syracuse, it is said that some of the students in the Academy, among whom Aristotle is mentioned, became dissatisfied with his absence, and tried to set up a new school; but were prevented by Iphikrates and Chabrias, the powerful friends of Plato at Athens. This story is connected with alleged ingratitude on the part of Aristotle towards Plato, and with alleged repugnance on the part of Plato towards Aristotle. The fact itself—that during Plato’s absence in Sicily his students sought to provide for themselves instruction and discussion elsewhere—is neither surprising nor blameable.’

Plato was intensely melancholy. That great broad brow, which gave him his surname, was wrinkled and sombre. Those brawny shoulders were bent with thought, as only those of thinkers are bent. A smile was the utmost that ever played over his lips; he never laughed. ‘As sad as

Plato' became a phrase with the comic dramatists. He had many admirers; scarcely any friends.

His intellect had so fixed itself upon the absorbing questions of philosophy, that it had scarcely any sympathy left for other matters. Hence his constant reprobation of Poets. Many suppose that the banishment of Poets from his *Republic* was but an insincere extension of his logical principles, and that he really loved poetry too well to condemn it. Plato's opposition to poets was however both deep and constant. He had a feeling not unallied to contempt for them, because he saw in them some resemblance to the Sophists, in their indifference to truth, and preference for the arts of expression. The only poetry Plato ever praises is *moral* poetry, which is versified philosophy. Poets, at the best, he held to be inspired madmen, unconscious of what fell from their lips. Let the reader open the *Ion* (it has been translated by Shelley); he will then perceive the cause of poets being banished from the *Republic*. Plato had a repugnance to poetry, partly because it was the dangerous rival of philosophy, partly because he had a contempt for pleasure.* It is true that he frequently quotes Homer, and, towards the close of the *Republic*, some misgivings of having harshly treated the favourite of his youth, escape him; but he quickly withdraws them, and owns that Truth alone should be man's object.

Let no one object to our assertion of his constant melancholy, on the ground of the comic talent displayed in his *Dialogues*. The comic writers are not the gayest men; even Molière, whose humour is so genial, overflowing, and apparently spontaneous, was one of the austere. Comedy often springs from the deepest melancholy, as if in sudden rebound. Moreover, in Plato's comedy there is almost always some under-current of bitterness: it is irony, not joyousness.

* Comp. *Philebus*, p. 131.

CHAPTER II.

PLATO'S WRITINGS: THEIR AUTHENTICITY, CHARACTER, AND OBJECT.

BEFORE attempting an account of Plato's doctrines, it may be useful to say something respecting the character and authenticity of his writings. Modern criticism, which spares nothing, has not left them untouched. Dialogues, the authenticity of which had never been questioned in antiquity, have been rejected by modern critics upon arbitrary grounds.

I cannot enter here into the details, I want the space; and, were there space, I might be excused from combating the individual positions, when I refuse to accept as valid the fundamental assumptions on which they repose. Internal evidence is generally deceptive; but the sort of internal evidence supposed to be afforded by comparative inferiority in artistic execution, is never free from great suspicion. Some of Plato's dialogues not being found equal to the exalted idea which his great works have led men to entertain, are forthwith declared to be spurious. But what writer is at all times equal to the highest of his own flights? What author has produced nothing but *chefs-d'œuvre*? Are there not times when the most brilliant men are dull, when the richest style is meagre, when the compactest style is loose? The same subjects will not always call forth the same excellence; how unlikely then that various subjects should be treated with uniform power! The *Theages* could hardly equal the *Theætetus*; the *Euthydemus* must be inferior to the *Gorgias*. No one thinks of disputing Shakspeare's claim to

the *Merry Wives of Windsor*, because it is immeasurably inferior to *Twelfth Night*, which, in its turn, is inferior to *Othello*.

Besides the dialogues rejected on account of inferior art, there are others rejected on account of immature or contradictory opinions. But this ground is as untenable as the former. No one has yet been able to settle definitively what was Plato's philosophy; yet opinions are said to be unworthy of that unsettled philosophy! A preconceived notion of Plato's having been a pure Socratist, has led to the rejection of whatever seemed contradictory to Socratic views. But there is abundant evidence to show that Plato was not a mere exponent of Socratic opinions. Moreover, in a long life a man's opinions undergo many modifications; and Plato was no exception to the rule. He contradicts himself constantly. He does so in works the authenticity of which no one has questioned; and we are not to be surprised if we find him doing so in others.

Without pretending to the special scholarship requisite for the thorough investigation of so intricate a question, I demurred, in the first edition of this work, against the initial assumptions on which the investigation had been conducted. Study of Plato had impressed on me the utter impossibility of fixing upon any consistent doctrine which could afford a test of authenticity; and some experience of the fallacious nature of internal evidence, applied even to the works of contemporaries, made me wholly sceptical of any arguments based on that ground. Inasmuch as we know extremely little of Plato except what we learn from the *Dialogues*, it is arguing in a circle to determine, from the knowledge gained from them, which dialogues are genuine. Schiller's *Robbers*, upon internal evidence, would have to be discarded as unauthentic, or else *Wallenstein* would be pronounced a forgery. Should all external evidence disappear, Auguste Comte will be robbed either of his *Système de Philosophie Positive* or his *Système de Politique Positive*, by critics who find an irreconcilable difference between the method and spirit of those works.

To this general demurrer may now be added the special refutation which Mr. Grote has so elaborately, and, in my opinion, so successfully, advanced in his work on Plato. He meets the critics on every ground; and shows that there is more assurance of authenticity in the case of the *Dialogues* than in that of any other contemporary writings, and more assurance for Plato than for Isocrates, Euripides, Lysias, Demosthenes, or Aristophanes. Having traced the history of their safe custody and the grounds for believing that the copies which were in the Alexandrine library were authentic, Mr. Grote says that Thrasyllus 'accepted the collection of Platonic compositions sanctioned by Aristophanes and recognised as such in the Alexandrine library. As far as our positive knowledge goes, it fully bears out what is here stated: all the compositions recognised by Aristophanes (unfortunately Diogenes does not give a complete enumeration of those which he recognised) are to be found in the catalogue of Thrasyllus. And the evidentiary value of this fact is so much the greater, because the most questionable compositions (I mean, those which modern critics reject or even despise) are expressly included in the recognition of Aristophanes, and passed from him to Thrasyllus—*Leges*, *Epinomis*, *Minos*, *Epistolæ*, *Sophistes*, *Politikus*. Exactly on those points on which the authority of Thrasyllus requires to be fortified against modern objectors, it receives all the support which coincidence with Aristophanes can impart. When we know that Thrasyllus adhered to Aristophanes on so many disputable points of the catalogue, we may infer pretty certainly that he adhered to him in the remainder. In regard to the question, Which were Plato's genuine works? it was perfectly natural that Thrasyllus should accept the recognition of the greatest library then existing: a library, the written records of which could be traced back to Demetrius Phalereus. He followed this external authority: he did not take each dialogue to pieces, to try whether it conformed to a certain internal standard, a "platonisches Gefühl"—of his own.

'That the question between genuine and spurious Platonic dialogues was tried in the days of Thrasyllus, by external authority and not by internal feeling—we may see farther by the way in which Diogenes Laertius speaks of the spurious dialogues. "The following dialogues (he says) are declared to be spurious *by common consent*: 1. Eryxias or Erasistratus. 2. Akephali or Sisyphus. 3. Demodokus. 4. Axiochus. 5. Halkyon. 6. Midon or Hippotrophus. 7. Phæakes. 8. Chelidon. 9. Hebdomé. 10. Epimenides." There was, then, unanimity, so far as the knowledge of Diogenes Laertius reached, as to genuine and spurious. All the critics whom he valued, Thrasyllus among them, pronounced the above ten dialogues to be spurious: all of them agreed also in accepting the dialogues in the list of Thrasyllus as genuine. Of course the ten spurious dialogues must have been talked of by some persons, or must have got footing in some editions or libraries, as real works of Plato: otherwise there could have been no trial had or sentence passed upon them. But what Diogenes affirms is, that Thrasyllus and all the critics whose opinion he esteemed, concurred in rejecting them. We may surely presume that this unanimity among the critics, both as to all that they accepted and all that they rejected, arose from common acquiescence in the authority of the Alexandrine library. The ten rejected dialogues were not in the Alexandrine library—or at least not among the rolls therein recognised as Platonic.

'If Thrasyllus and the others did not proceed upon this evidence in rejecting the ten dialogues, and did not find in them any marks of time such as to exclude the supposition of Platonic authorship—they decided upon what is called internal evidence: a critical sentiment, which satisfied them that these dialogues did not possess the Platonic character, style, manner, doctrines, merits, &c. Now I think it highly improbable that Thrasyllus could have proceeded upon any such sentiment. For when we survey the catalogue of works which he recognised as genuine, we see that it includes the widest diversity of style, manner, doctrine, purpose, and

merits: that the disparate epithets, which he justly applies to discriminate the various dialogues, cannot be generalized so as to leave any intelligible "Platonic character" common to all. Now since Thrasyllus reckoned among the genuine works of Plato, compositions so unlike, and so unequal in merit, as the *Republic*, *Protagoras*, *Gorgias*, *Lysis*, *Parmenides*, *Symposium*, *Philebus*, *Menexenus*, *Leges*, *Epinomis*, *Hipparchus*, *Minos*, *Theages*, *Epistolæ*, &c., not to mention a composition obviously unfinished, such as the *Kritias*—he could have little scruple in believing that Plato also composed the *Eryxias*, *Sisyphus*, *Demodokus*, and *Halkyon*. These last-mentioned dialogues still exist, and can be appreciated. Allowing, for the sake of argument, that we are entitled to assume our own sense of worth as a test of what is really Plato's composition, it is impossible to deny, that if these dialogues are not worthy of the author of *Republic* and *Protagoras*, they are at least worthy of the author of the *Leges*, *Epinomis*, *Hipparchus*, *Minos*, &c. Accordingly, if the internal sentiment of Thrasyllus did not lead him to reject these last four, neither would it lead him to reject the *Eryxias*, *Sisyphus*, and *Halkyon*. I conclude therefore that if he, and all the other critics whom Diogenes esteemed, agreed in rejecting the ten Dialogues as spurious—their verdict depended not upon any internal sentiment, but upon the authority of the Alexandrine library.

'On this question, then, of the Canon of Plato's works (as compared with the works of other contemporary authors) recognised by Thrasyllus—I consider that its claim to trustworthiness is very high, as including all the genuine works, and none but the genuine works, of Plato: the following facts being either proved, or fairly presumable.

'1. The Canon rests on the authority of the Alexandrine library and its erudite librarians; whose written records went back to the days of Ptolemy Soter, and Demetrius Phalereus, within a generation after the death of Plato.

'2. The manuscripts of Plato at his death were preserved in the school which he founded; where they continued for

more than thirty years under the care of Speusippus and Xenokrates, who possessed personal knowledge of all that Plato had really written. After Xenokrates, they came under the care of Polemon and the succeeding Scholarchs, from whom Demetrius Phalereus probably obtained permission to take copies of them for the nascent museum or library at Alexandria—or through whom at least (if he purchased from booksellers) he could easily ascertain which were Plato's works, and which, if any, were spurious.

'3. They were received into that library without any known canonical order, prescribed system, or interdependence essential to their being properly understood. Kallimachus or Aristophanes devised an order of arrangement for themselves, such as they thought suitable.'

But whether all the Dialogues were the production of Plato or not, they equally serve the purpose of this History, since no one denies them to be *Platonic*. We may therefore leave this question, and proceed to others.

Do the Dialogues contain the real opinions of Plato? This question has three motives. 1st. Plato himself never speaks *in propria persona*, unless indeed the Athenian in the *Laws* be accepted as representing him; a supposition in which I am inclined to concur. 2ndly. From certain passages in the *Phædrus* and the *Epistles*, it would appear that Plato had a contempt for written opinions, as inefficient for instruction. 3rdly. On the testimony of a phrase in Aristotle, it is supposed that Plato, like Pythagoras, had exoteric and esoteric opinions; the former being, of course, those set forth in his Dialogues.

I will endeavour to answer these doubts. The first is of very little importance; the second of greater; the last of very great importance. That Plato adopts the dramatic form, and preserves it, is true; but this form, which quite baffles us with Shakspeare, baffles us with no one else. It is easy to divine the opinions of Aristophanes, Molière, or Schiller. It should be easy to divine the opinions of Plato, because, unlike the dramatists, he selects his dialogue solely with a view to

the illustration of his opinions. And in a certain sense this is true. We are quite justified in assuming that the views which are put forth dogmatically in the expository Dialogues were the views Plato held at the time of composing those Dialogues, however these may differ amongst each other. And even in the dialogues of Search, mere dialectical exercises although they may be, there is a recurrence of certain views, more or less modified, and a general unity of method, which assure us that we have the real thoughts of the writer presented. We can thus speak without misgiving of a Platonic Method, though not of a Platonic System; of Platonic opinions, though not of a Platonic Philosophy.

Respecting the insufficiency of books to convey instruction, we may first quote what 'Socrates' says on the subject in the *Phædrus*:—

'Writing is something like painting: the creatures of the latter art look very like living beings: but, if you ask them a question, they preserve a solemn silence. Written discourses do the same: you would fancy, by what they say, that they had some sense in them; but, if you wish to learn, and therefore interrogate them, they have only their first answer to return to all questions. And when the discourse is once written, it passes from hand to hand, among all sorts of persons, those who can understand it, and those who cannot. It is not able to tell its story to those only to whom it is suitable; and, when it is unjustly criticized, it always needs its author to assist it, for it cannot defend itself. There is another sort of discourse, which is far better and more potent than this.—What is it? That which is written scientifically in the learner's mind. This is capable of defending itself, and it can speak itself, or be silent, as it sees fit.—You mean the real and living discourse of the person who understands the subject; of which discourse the written one may be called the picture? Precisely.—Now, think you that a sensible husbandman would take seed which he valued, and wishing to produce a harvest, would seriously, after the summer had begun, scatter it in the gardens of

Adonis,* for the pleasure of seeing it spring up and look green in a week? Or do you not rather think that he might indeed do this for sport and amusement; but, when his purpose was serious, would employ the art of agriculture, and, sowing the seed at the proper time, be content to gather in his harvest in the eighth month? The last, undoubtedly.—And do you think that he who possesses the knowledge of what is just, and noble, and good, will deal less prudently with *his* seeds than the husbandman with his? Certainly not.—He will not, then, set about sowing them with a pen and a black liquid; or (to drop the metaphor) scattering these truths by means of discourses, which cannot defend themselves against attack, and which are incapable of adequately expounding the truth. No doubt he will, *for the sake of sport*, occasionally scatter some of the seeds in this manner, and will thus *treasure up memoranda for himself*, in case he should fall into the forgetfulness of old-age, and for all others who follow in the same track; and he will be pleased when he sees the blade growing up green.†

Now, this remarkable passage is clearly biographical. It is the justification of Socrates's philosophical career. But it must not be too rigorously applied to Plato, whose voluminous writings contradict it; nor must we suppose that those writings were designed only for amusement, or as memoranda for his pupils. The main idea of this passage is one which few persons would feel disposed to question. We are all aware that books labour under very serious deficiencies; they cannot replace oral instruction. The frequent misapprehensions of an author's meaning would in a great measure be obviated if we had him by our side to interrogate him. And oral instruction has the further advantage of not allowing the reader's mind to be so *passive* as it is with a book: the teacher by his questions excites the activity of the pupil. All this may reasonably be conceded as Plato's opinion, without at all affecting the serious purpose of his

* 'The gardens of Adonis,' a periphrasis for mignonette-boxes.

† *Phædrus*, p. 98.

writings. Plato thought that conversation was more instructive than reading; but he knew that reading was also instructive, and he wrote: to obviate as much as possible the necessary inconveniences of written discourse, he threw all his works into the form of dialogue. Hence the endless repetitions, divisions, and illustrations of positions almost self-evident. The reader is fatigued by them; but, like the humorist's tediousness, they have 'a design' in them: that design is, by imitating conversation, to leave no position unexplained. As a book cannot be interrogated, Plato makes the book anticipate interrogations. The very pains he takes to be tedious, the very minuteness of his details, is sufficient to rescue his works from the imputation of being mere amusements. He was too great an artist to have sacrificed his art to anything but his convictions. That he did sacrifice the general effect to his scrupulous dialectics, no one can doubt; and we believe that he did so for the sake of deeply impressing on the reader's mind the real force of his Method. Had the critics recognised Plato's real drift, we believe they would have spared much of their censure, and hesitated before pronouncing against the genuineness of certain dialogues.

Connected with Plato's expressions respecting the imperfection of written works, there is a passage in Aristotle, referring to the *ἀγραφα δόγματα*, or 'unwritten opinions,' which is supposed to indicate an esoteric doctrine. If Aristotle's words do bear that meaning, then is the opinion consistent and valid, which regards the exoteric works—the Dialogues—as mere diversions. Let us examine it.

Aristotle says that Plato, in the *Timæus*, maintained space and matter to be the same, but that, in what are called the unwritten opinions (*ἐν τοῖς λεγομένοις ἀγράφοις δόγμασι*), he considered space and place (*τὸν τόπον καὶ τὴν χώραν*) to be the same.* From such a passage it is surely somewhat gratuitous

* *Phys.* iv. c. 2, p. 53. RITTER, who refers to but does not cite the passage, gives us to understand that, in these unwritten opinions, 'much was explained differently, or, at least, more definitely than in the Dialogues.' But no such conclusion

to conclude that Plato had an esoteric doctrine. The *ἄγραφα δόγματα* probably meant his lectures, or, as Ritter suggests, notes taken from the lectures by his scholars. At any rate there is no ground for supposing them to have been esoteric opinions; the more so as Aristotle, his most illustrious pupil, never speaks of any such distinct doctrine, but draws his statements of Plato's views from published works.

The ancients, we are told by Sextus Empiricus,* were divided amongst themselves as to whether Plato was a sceptic or a dogmatist. Nor was the dispute irrational; for, as some of the Dialogues are expository and dogmatical, and others are mere exercises of the dialectical method—mere contests in which nothing is definitely settled—any one having studied only one class of these Dialogues would think Plato either a sceptic or a dogmatist, according to the nature of those which he had read. Thus Cicero, an ardent admirer, says, 'Plato affirms nothing; but, after producing many arguments, and examining a question on every side, leaves it undetermined.' This is true of such dialogues as the *Theætetus*, or the *Hippias Major*; but untrue of the *Phædo*, *Timæus*, *Laws*, &c.

When it is said that Plato held such or such an opinion, it should be distinctly stated in what dialogue it appears, and whether it is there affirmative or simply dialectical; because, in speaking of so long a career, containing so many changes of opinion, it is necessary to be precise. There is scarcely a single opinion held by him *throughout* his works. Even the Socratic view of Virtue being identical with Knowledge, consequently of Vice being Ignorance, and therefore involuntary—even this idea he learned in his old-age to repudiate, as we see in the *Laws* (v. p. 385), where he calls *incontinence*, no less than ignorance (*ἡ δὲ ἀμαθία ἢ δὲ ἀκράτεια*), the cause

can be drawn from Aristotle. There is no greater difference alluded to in the passage than may frequently be found between one dialogue and another. If the written (published) opinions differ, surely those unwritten may be allowed also to differ from the written. If the *Republic* differs from the *Timæus*, surely the 'unwritten opinion' may differ from the *Timæus*.

* *Pyrrhon. Hypot.* i. p. 44.

of vice. In the same sense (iv. p. 138), after speaking of anger and pleasure as causes of error, he says, 'There is a third cause of our faults, and that is ignorance' (*τρίτον ἄγνοια τῶν ἀμαρτημάτων αἰτία*). So that here he places Ignorance only as a third cause; and by so doing destroys the whole Socratic argument respecting the identity of Virtue and Knowledge. Nay, more. He is not consistent even in his conception of the true mode of philosophizing; he is not unswerving even in his allegiance to Socrates. If there is one characteristic of his great master to which the pupil might be supposed preeminently attached, it is that of the negative procedure of cross-examination; yet this, which in so many dialogues he has exhibited with singular vivacity and force, is quietly set aside in the affirmative dialogues, and in the *Republic* and the *Laws* is pointedly condemned. Socrates declared that it was his mission to expose the pretence of knowledge; not to furnish opinions, but the intellectual activity which might seek and find truth. He knew nothing; professed himself incapable of teaching anything beyond the humiliating lesson of ignorance pretending to be knowledge. He urged upon all—upon the young especially—the necessity of following his example. But Plato, in the *Republic*, severely condemns this presumptuous cross-questioning, especially on the part of the young. He regards it as the vice of the time. He deprecates the disturbance of those opinions which they have learned from the lawgiver respecting what is just and honourable—opinions, namely, which in other dialogues Socrates is made to exhibit as untaught, perhaps unteachable, acquired no man knows how, and constituting that very illusion of knowledge which the Elenchus was to dispel, and which must be dispelled before improvement could be possible.

This contradiction Mr. Grote calls upon us to notice as decidedly anti-Socratic, and even anti-Platonic in so far as Plato represents Socrates. The prohibition of dialectic debate belongs indeed to the case of Meletus and Anytus on their indictment against Socrates before the dikastery. It is

identical with their charge against him of corrupting youth and inducing them to fancy themselves superior to the authority of established opinions.*

In the *Protagoras* Socrates maintains that the Good is identical with the Pleasurable, and Evil identical with the Painful. In the *Gorgias* he maintains the reverse. In fact, as Mr. Grote truly says, it is 'scarcely possible to resolve all the diverse manifestations of the Platonic mind into one higher unity; or to predicate, about Plato as an intellectual person, anything which shall be applicable at once to the *Protagoras*, *Gorgias*, *Parmenides*, *Phædrus*, *Symposium*, *Philebus*, *Phædon*, *Republic*, *Timæus*, and *Leges*. Plato was sceptic, dogmatist, religious mystic and inquisitor, mathematician, philosopher, poet (erotic as well as satirical), rhetor, artist—all in one: or at least, all in succession, throughout the fifty years of his philosophical life. At one time his exuberant dialectical impulse claims satisfaction, manifesting itself in a string of ingenious doubts and unsolved contradictions: at another time, he is full of theological antipathy against those who libel Helios and Selene, or who deny the universal providence of the Gods: here, we have unqualified confessions of ignorance, and protestations against the false persuasion of knowledge, as alike wide-spread and deplorable—there, we find a description of the process of building up the Kosmos from the beginning, as if the author had been privy to the inmost purposes of the Demiurgus. In one dialogue the erotic fever is in the ascendant, distributed between beautiful youths and philosophical concepts, and confounded with a religious inspiration and *furor* which supersedes and transcends human sobriety (*Phædrus*): in another, all vehement impulses of the soul are stigmatized and repudiated, no honourable scope being left for anything but the calm and passionless Nous (*Philebus*, *Phædon*). Satire is exchanged for dithyramb and mythe,—and one ethical point of view for

* The *Meno* is a further confirmation. In it virtue is shown to be unsusceptible of being taught: *ergo*, it is not Knowledge. This would make the *Meno* one of the latest works. Neither of these contradictions has, to my knowledge, been noticed before.

another (*Protagoras*, *Gorgias*). The all-sufficient dramatizing power of the master gives full effect to each of these multifarious tendencies. On the whole—to use a comparison of Plato himself—the Platonic sum total somewhat resembles those fanciful combinations of animals imagined in the Hellenic mythology—an aggregate of distinct and disparate individualities, which look like one because they are packed in the same external wrapper.'

There are certain theoretical views which, because they frequently recur in more or less modified forms, may be loosely styled Platonic, such for instance as the theory of Ideas and the theory of Reminiscence, but they are sometimes disregarded, at others contradicted; and the final result of any searching examination of the Dialogues must be the conviction that they contain no doctrine, no system consistent in its relations. Indeed, as Mr. Grote well says, 'That in 406 B.C., and at the age of 23, in an age when schemes of philosophy elaborated in detail were unknown—Plato should conceive a vast scheme of philosophy, to be worked out underground without ever being proclaimed, through numerous Sokratic dialogues one after the other, each ushering in that which follows and each resting upon that which precedes: that he should have persisted throughout a long life in working out this scheme, adapting the sequence of his dialogues to the successive stages which he had attained, so that none of them could be properly understood unless when studied immediately after its predecessors and immediately before its successors—and yet that he should have taken no pains to impress this one peremptory arrangement on the minds of readers, and that Schleiermacher should be the first to detect it—all this appears to me as improbable as any of the mystic interpretations of Jamblichus or Proklus. Like other improbabilities, it may be proved by evidence, if evidence can be produced: but here nothing of the kind is producible. We are called upon to grant the general hypothesis without proof, and to follow Schleiermacher in applying it to the separate dialogues.'

Hegel, although admitting that in Plato there is a philosophical spirit which does not express itself in a distinct doctrine because the age was not yet ripe for a doctrine, somewhat inconsistently declares that it is want of due comprehension on the reader's part as to what constitutes philosophy which makes the difficulty of understanding Plato's philosophy.* His own account of Plato seems to me entirely arbitrary. Mr. Maurice, on the other hand, considers it a merit in the Dialogues that 'there you find no digests of doctrine, no collections of ready manufactured notions to be adopted and carried away.' 'Not to frame a comprehensive system which shall include nature and society, man and God, as its different elements, or in its different compartments, and which therefore necessarily leads the system-builder to consider himself above them all, but to demonstrate the utter impossibility of such a system, to cut up the notion and dream of it by the roots, this is the work and glory of Plato.†

After having read every one of Plato's Dialogues (an excessively wearisome labour) and done my best to arrive at a distinct understanding of their purpose, I come to the conclusion that he never systematized his thoughts, but allowed free play to scepticism, taking opposite sides in every debate because he had no steady conviction to guide him; unsaying to-day what he had said yesterday, satisfied to show the weakness of an opponent. Mr. Grote, who accepts the *Epistles* as genuine, relies on their declaration that the highest principles of philosophy could not be set forth in writing so as to be intelligible to ordinary minds; only a few could apprehend them, and they only through an illumination kindled by multiplied debate and much mental effort. 'I have never written anything on these subjects; there neither is, nor shall there ever be, any treatise of Plato. The opinions called by the name of Plato are those of Socrates in his days of youthful vigour and glory.' This last statement requires qualification, since the known opinions of Socrates are some-

* HEGEL, *Gesch. d. Phil.* ii. 170, 186.

† MAURICE, *Moral and Metaph. Philos.* part i.; *Ancient Phil.* 129, 137.

times flatly contradicted; but if we alter the phrase into 'The opinions called by the name of Plato are opinions dramatically put forth as dialectical displays,' it may be accepted. Certain it is that nowhere in his own name does he express opinions, nor did he ever compose a treatise.

Was this reserve owing to philosophical incompetence? Did he withhold a system because, in truth, he had no system to produce? It seems to me that he taught nothing decisively because, like many other active sceptical intellects, he was afraid of committing himself. And like many others he concealed his own vacillations by assuming a native incompetence in the public. Plato was not wanting in dogmatic impulse, but he was unable patiently to think out a system; and the vacillating lights which shifted constantly before him, the very scepticism which gave such dramatic flexibility to his genius, made him aware that any affirmation he could make was liable to be perplexed by cross lights, or would admit of unanswerable objections. He is perpetually refuting himself. If there is one theory which might be attributed to him and with all the greater show of reason because it is attributed to him by his pupil Aristotle, it is the theory of Ideas; yet this theory is not only variously modified in various dialogues, but in the *Parmenides* is triumphantly refuted.

I do not say it was intellectual weakness, perhaps rather it was intellectual strength, which determined his reserve. At any rate, it was philosophical incompetence. Partly owing to his acuteness, and partly to his scepticism, he could nowhere find firm ground and solid material. The guesses of to-day were likely to be rejected for the guesses of to-morrow; and in the absence of any positive criterion, philosophy could only proceed upon guesses. A man of narrower or more impassioned intellect would have resolutely seized on some of the cardinal notions with which Plato dallied, and, like Plotinus, would have built a system out of them. An intellect of greater organizing power—like Aristotle—would have settled a few premisses once for all, and from them deduced a scheme of the universe. But Plato was essentially a

dialectician. His intellect delighted in the play of ideas. At a time when schemes of the universe were so easy, and when proof was rarely demanded, he could content himself with no scheme because he felt dimly that proof was needed, and saw that he had none to furnish. Add to this the native dramatic disposition of his mind, and a certain emotional susceptibility which made him peculiarly liable to what may be called the mythic mirage, and we may understand how he was indisposed to scientific clearness. Tradition, Theology, and Poetry were always struggling in his mind with Dialectics. Hence it is that in spite of the cross-examining Elenchus learned from Socrates, in spite of a negative tendency which made him active in doubt even to the idlest quibbling, there probably never was a thinker of eminence who accepted with more childish credulity notions which a question would refute, guesses which a mature man might blush to have entertained. Sharp-sightedness and silliness are sometimes yoked together in perfect amity. Noble thoughts and nonsense may be quoted from his works in sufficient abundance to justify veneration or contempt.

Whatever may have been the cause which prevented Plato from thinking out a system, it is incredible to me that there was any other cause which prevented its promulgation. If he was silent, it was because he was without a doctrine. If he kept an enigma before the world, it was because to himself it remained an enigma. Had he clearly seen the truth, he would never have doubted the capacity of other minds to see it also; nor would he have doubted his own capacity of making them see it. There is a fervour in conviction which impels utterance. But there is a timidity in minds unassured which prompts all the artifices of reticence: they fear to show their precious jewel lest the spectator irreverently declare it to be paste; they fear to express their thoughts, lest the expression should not do them justice. Every day one meets people who hint mysteriously that they have discovered the great secret which other minds are seeking; they assure you, in covert or in overt phrase, that all the world is hopelessly

wrong—this man fancying he is approaching the truth, and not aware of the impassable chasm which yawns before him; that man starting on the right path, but having overlooked the truth and passed it—so that you may understand how they, and they alone, can disclose the secret if they will; only they never will.

How far Plato may have been withheld by intellectual or by moral misgivings we cannot say; but we know that he was withheld from anything like a formal exposition of his views; and the Platonic philosophy, meaning by it more than certain ideas which may be found in certain dialogues, is nowhere to be seen out of the works of interpreters. But this denial of a philosophy, and the admission that his writings contain a large amount of triviality and absurdity, should not interfere with our recognition of his greatness. To appreciate Plato, as to appreciate all the great minds that have achieved supreme distinction among mankind, it is necessary to keep before us the luminous thought expressed by Wordsworth, and frequently reproduced by De Quincey, which classes all Literature under two divisions—the Literature of Power, and the Literature of Knowledge. The amount of effective thought available for our purposes, which is now to be found in Plato, is assuredly very small; the amount of knowledge scarcely rises above zero. But the dynamic influence of this thinker, who for twenty centuries has been a great intellectual force, stimulating the minds he could not instruct, strengthening those he could not guide—*ad impellendum satis, ad edocendum parum*—still remains, and will ever remain, a source of power.

If there were any one doctrine running through the Dialogues, a classification of the Dialogues would be indispensable. Since it is not so, however, the question of classification becomes therefore of little importance; and we may resign ourselves more patiently to the fact that no two persons seem to agree as to the precise arrangement. Any attempt at chronological arrangement must inevitably fail. Certain dialogues can be satisfactorily shown to have been written

subsequently to some others; but any regular succession is beyond our ingenuity. We may be pretty sure that the *Phædrus* was the earliest,* or one of the earliest, and the *Laws* the latest. We may be sure that the *Republic* was earlier than the *Laws*, because the latter is a maturer view of politics. But when the *Republic* was written, baffles conjecture. It is usually placed with the *Timæus* and the *Laws*; that is to say, with the last products of its author. But we demur to this on several accounts. The differences of style and of ideas observable in the *Republic* and the *Laws*, imply considerable distance between the periods of composition. Besides, a man not writing for his bread does not so soon resume a subject which he has already treated with great fulness. Plato had uttered his opinions in the *Republic*. He must have waited till new ideas were developed, before he could be tempted again to write; for observe, both these dialogues are expository and dogmatical: they express Plato's opinions; they are not merely dialectical exercises.

Whenever two works exhibit variations of opinion, we should examine the nature of the variations and ask, which of the two opinions is the later in development—which must have been the earlier? Let us take an example. In the *Republic* (iii. p. 123) he attempts to prove that no one can excel in two arts; that the comic poet cannot be the same as the tragic, the same actor cannot act in tragedy and comedy with success. In the *Amatores* (p. 289) he has the same idea, though there only mentioned briefly.† In the *Symposium*, however, Plato's opinion is directly the reverse; for, in a celebrated passage, he makes Socrates convince Agathon that the tragic and comic poet are the same person.

* See on this point Mr. THOMPSON'S note to BUTLER: *Lectures on Hist. of Ancient Phil.* ii. p. 44.

† According to RITTER'S principle, this would prove the *Republic* to be later than the *Amatores*. He maintains, and with plausibility, that, when a subject which has been developed in one dialogue is briefly assumed in another, the latter is subsequent in composition. (RITTER, vol. ii. p. 183.) Yet, on this principle, the *Phædo* is earlier than the *Phædrus*, inasmuch as the doctrine of reminiscence is developed in the former and alluded to in the latter.

Now, it is not difficult to decide which is the earlier opinion: in the *Republic* it is the logical consequence of his premisses; but in the *Symposium* that opinion is corrected by experience, for in the poets of his own day Plato found both tragedy and comedy united; and as Socrates is made to convince Agathon, we may conclude that the former opinion was not uncommon, and that Plato here makes a retractation. No one will deny that the former opinion is superficial. The distinction between tragedy and comedy is such that it seems to imply a distinct nature to attain excellence in each. But Euripides, Shakspeare, Racine, Cervantes, Calderon, and many others, confute this seeming by their dramas.

Perhaps a still more conclusive example is that of the 'creation of Ideas,' so expressly stated in the *Republic*, and the 'eternity and uncreated nature of Ideas,' as expressly stated in the *Timæus*. So radical a difference would at once separate the epochs at which the two dialogues were composed. And to this may be added the difference in artistic treatment between the *Republic* and the *Timæus*. The former, although expository, has much of the vivacity and dramatic vigour of the early dialogues. The *Timæus* and the *Laws* have scarcely a trace of art.

As a chronological arrangement has been impossible, a philosophical arrangement has frequently been attempted. The most celebrated is that of Schleiermacher, who divides the Dialogues into three classes:—1st. *Elementary dialogues*, or those which contain the germs of all that follows,—of logic as the instrument of philosophy, and of ideas as its proper object; consequently, of the possibility of the conditions of knowledge: these are the *Phædrus*, *Lysis*, *Protagoras*, *Laches*, *Charmides*, *Euthyphro*, and *Parmenides*; to which he subjoins, as an appendix, the *Apologia*, *Crito*, *Ion*, *Hippias Minor*, *Hipparchus*, *Minos*, and *Alcibiades II.* 2nd. *Progressive dialogues*, which treat of the distinction between philosophical and common knowledge in their united application to the two proposed and real sciences, Ethics and Physics: these are the *Gorgias*, *Theætetus*, *Meno*, *Euthydemus*, *Cratylus*, *Sophistes*,

Politicus, *Symposium*, *Phædo*, and *Philebus*; with an appendix containing the *Theages*, *Amatores*, *Alcibiades I.*, *Menexenus*, *Hippias Major*, and *Clitophon*. 3rd. *Constructive dialogues*, in which the practical is completely united with the speculative; these are the *Republic*, *Timæus*, *Critias* with an appendix containing the *Laws* and the *Epistles*.* There is considerable ingenuity in this; and it has been adopted by Bekker in his edition. It has however been much criticized, as every such attempt must necessarily be. Van Heusde, in his charming work,† has suggested another. He proposes three classes: 1, those wherein the subject-matter relates to the Beautiful; 2, those wherein it relates to the True; 3, those wherein it relates to the Practical. Of the first are those concerning Love, Beauty, and the Soul. Of the second, those concerning Dialectics, Ideas, Method; in which Truth and the means of attaining it are sought. Of the third, those concerning justice; i. e. morals and politics. These three classes represent the three phases of the philosophical mind: the desire for Truth, the appreciation of Truth, and the realization of it, in an application to human life.

There is one great objection to this classification, namely, the impossibility of properly arranging the Dialogues under the separate heads. The *Phædrus*, which Van Heusde believes devoted to Love and Beauty, Schleiermacher has clearly shown to be devoted to Dialectics. So of the rest: Plato mixes up in one dialogue very opposite subjects. Van Heusde is also under the erroneous conviction of Plato's having been only a Socratist till he went to Megara, where he became imbued with the Eleatic doctrines; and that it was in his maturer age that he became acquainted with the Pythagorean philosophy.

It seems to me that the Dialogues may reasonably be divided into the two classes named by Sextus Empiricus:—Dogmatic and Agonistic, or Expository and Polemical. The advantage of this division (which is adopted by Mr. Grote

* *Penny Cyclopædia*, Art. *Plato*, p. 236.

† VAN HEUSDE, *Initia Philosophiæ Platoniciæ*, i. 72.

under the titles of 'Dialogues of Exposition' and 'Dialogues of Search') is its clearness and practicability. There will always be something arbitrary in the endeavour to classify the Dialogues according to their subject-matter, because they are almost all occupied with more than one subject. Thus the *Republic* would certainly be classed under the head of Ethics; yet it contains very important discussions on the nature of human knowledge, and on the theory of Ideas; and these discussions ought properly to be classed under the head of Metaphysics. Again, the *Phædrus* is more than half occupied with discourses about Love; but the real subject of the work is Dialectics.

In the division here proposed such inconveniences are avoided. It is easy to see which dialogues are polemical and which are expository. The *Hippias Major* and the *Timæus* may stand as representatives of each class. In the former no attempt is made to settle the question raised. Socrates contents himself with refuting every position of his antagonist. In the *Timæus* there is no polemic of any sort: all is calmly expository.

CHAPTER III.

PLATO'S METHOD.

‘THE first thing it is necessary to do in science,’ says Aristotle, ‘is to state all the difficulties which have to be resolved. These difficulties are the diverse contradictory opinions of philosophers and the obscurities which they have failed to clear up. The true solution is nothing but the clearing up of those difficulties. . . . We are necessarily in the best position to decide after hearing all the reasons of the opposing advocates.’*

This is the philosophic justification of the course pursued by Socrates and Plato in submitting all questions to the rigorous process of cross-examination. It is a vindication of that constant (and wearisome) employment of the purely negative and dubitative process, which is the main purpose of the Dialogues of Search. Debate was good in itself, good if it ended in no other result than that of impressing on the mind a conviction of ignorance. We must not seek in Plato for more than debate; we must not seek conclusions, at least not in the Dialogues of Search. Mr. Grote truly says:—

‘The modern reader must be invited to keep these postulates in mind, if he would fairly appreciate the Platonic Dialogues of Search. He must learn to esteem the mental exercise of free debate as valuable in itself, even though the goal recedes before him in proportion to the steps which he makes in advance. He perceives a lively antithesis of opinions, several distinct and dissentient points of view

* ARISTOTLE, *Metaph.* ii. 1, 995: ἔτι δὲ βέλτιον ἀνάγκη ἔχειν πρὸς τὸ κρίναι τὸν ὥσπερ ἀντιδίκων καὶ τῶν ἀμφισβητούντων λόγων ἀκηκοῦσα πάντων.

opened, various tentatives of advance made and broken off. He has the first half of the process of truth-seeking, without the last; and even without full certainty that the last half can be worked out, or that the problem as propounded is one which admits of an affirmative solution. But Plato presumes that the search will be renewed, either by the same interlocutors or by others. He reckons upon responsive energy in the youthful subject: he addresses himself to men of earnest purpose and stirring intellect, who will be spurred on by the dialectic exercise itself to farther pursuit—men who, having listened to the working out of different points of view, will meditate on these points for themselves, and apply a judicial estimate conformable to the measure of their own minds. Those respondents, who, after having been puzzled and put to shame by one cross-examination, became disgusted and never presented themselves again—were despised by Sokrates as lazy and stupid. For him, as well as for Plato, the search after truth counted as the main business of life.

‘Another matter must here be noticed, in regard to these Dialogues of Search. We must understand how Plato conceived the goal towards which they tend: that is, the state of mind which he calls *knowledge* or *cognition*. Knowledge (in his view) is not attained until the mind is brought into clear view of the Universal Forms or Ideas, and intimate communion with them: but the test (as I have already observed) for determining whether a man has yet attained this end or not, is to ascertain whether he can give to others a full account of all that he professes to know, and can extract from them a full account of all that they profess to know: whether he can perform, in a manner exhaustive as well as unerring, the double and correlative function of asking and answering: in other words, whether he can administer the Sokratic cross-examination effectively to others, and reply to it without faltering or contradiction when administered to himself. Such being the way in which Plato conceives knowledge, we may easily see that it cannot be produced, or even approached, by direct, demonstrative,

didactic, communication: by simply announcing to the hearer, and lodging in his memory, a theorem to be proved, together with the steps whereby it is proved. He must be made familiar with each subject on many sides, and under several different aspects and analogies: he must have had before him objections with their refutation, and the fallacious arguments which appear to prove the theorem, but do not really prove it: he must be introduced to the principal counter-theorems, with the means whereby an opponent will enforce them: he must be practised in the use of equivocal terms and sophistry, either to be detected when the opponent is cross-examining him, or to be employed when he is cross-examining an opponent. All these accomplishments must be acquired, together with full promptitude and flexibility, before he will be competent to perform those two difficult functions, which Plato considers to be the test of knowledge. You may say that such a result is indefinitely distant and hopeless: Plato considers it attainable, though he admits the arduous efforts which it will cost. But the point which I wish to show is, that if attainable at all, it can only be attained through a long and varied course of such dialectic discussion as that which we read in the Platonic Dialogues of Search. The state and aptitude of mind called knowledge, can only be generated as a last result of this continued practice (to borrow an expression of Longinus). The Platonic method is thus in perfect harmony and co-ordination with the Platonic result, as described and pursued.

It is a mistake to interpret these debates as mere displays of dialectical ingenuity: they were the gropings of Plato himself.

'The doubts and difficulties were certainly exercises to the mind of Plato himself, and were intended as exercises to his readers: but he has nowhere provided a key to the solution of them. Where he propounds positive dogmas, he does not bring them face to face with objections, nor verify their authority by showing that they afford satisfactory solution of the difficulties exhibited in his negative procedure. The

two currents of his speculation, the affirmative and the negative, are distinct and independent of each other. Where the affirmative is especially present (as in *Timæus*), the negative altogether disappears. *Timæus* is made to proclaim the most sweeping theories, not one of which the real Sokrates would have suffered to pass without abundant cross-examination: but the Platonic Sokrates hears them with respectful silence, and commends afterwards. The declaration so often made by Sokrates that he is a searcher, not a teacher—that he feels doubts keenly himself, and can impress them upon others, but cannot discover any good solution of them—this declaration, which is usually considered mere irony, is literally true. The Platonic theory of Objective Ideas separate and absolute, which the commentators often announce as if it cleared up all difficulties—not only clears up none, but introduces fresh ones belonging to itself. When Plato comes forward to affirm, his dogmas are altogether *à priori*: they enunciate preconceptions or hypotheses, which derive their hold upon his belief, not from any aptitude for solving the objections which he has raised, but from deep and solemn sentiment of some kind or other—religious, ethical, æsthetical, poetical, &c., the worship of numerical symmetry or exactness, &c. The dogmas are enunciations of some grand sentiment of the divine, good, just, beautiful, symmetrical, &c., which Plato follows out into corollaries. But this is a process of itself; and while he is performing it, the doubts previously raised are not called up to be solved, but are forgotten or kept out of sight. It is therefore a mistake to suppose that Plato ties knots in one dialogue only with a view to untie them in another; and that the doubts which he propounds are already fully solved in his own mind, only that he defers the announcement of the solution until the embarrassed hearer has struggled to find it for himself.

The Method employed by Plato was the Subjective. The test he uniformly applied was that of submitting the external order to his conceptions of what was rational, without

previously determining how he came by those conceptions of rationality, and what guarantee they offered of being themselves demonstrable. 'Laying down some general hypothesis,' he says in the *Phædo*, 'which I considered to be the best, I accepted as truth whatever squared with it respecting cause, as well as other things.' This frank avowal is confirmed by every speculation. When he attempts to prove that the wrong-doer is more miserable than the wrong-sufferer, he never attempts to show what Good and Evil are, or by what characters they may be recognised; he only intimates that they correspond with certain conceptions in his own mind; and in endeavouring to prove that the successful criminal *must* be miserable, though no misery is felt by him, Plato merely displays his habitual indifference to facts in favour of deductive conclusions. Having assumed the existence of the Ideas of Greatness and Littleness apart from great and little Things, he concluded that it was through participation in these Ideas that things were great and little—whereas the Objective Method necessarily leads to the conclusion that from great and little Things we form the abstractions of Greatness and Littleness. 'If I am told,' he says, 'that one man is taller than another by the head, and that this one is shorter than the first by the same, I should not admit the proposition, but repeat my own creed, that whatever is greater than another is greater by nothing else except by Greatness, whatever is less than another is less only through Littleness. For I should fear to be entangled in a contradiction if I affirmed that the greater man was greater, and the lesser man less, by the same thing (the head), and next in saying that a man was greater by a head which is itself little. . . Again, when One is placed beside One, or when One is divided, I should not affirm that juxtaposition was the cause of Two in the first case, and division in the second. I proclaim loudly that I know of no other cause for its becoming Two, except participation in the essence of Twoness (the Dyad). That which becomes Two must partake of the Dyad; as one of the Monad.'

It may puzzle the modern reader to conceive a man of Plato's intellect not being suddenly made aware of the fallacious nature of a Method which could lead to such results. But Plato, though not unaware of the violence to common sense which might seem to lie in his conclusions, thus meets the objection: 'If any impugn the hypothesis, I should make no reply to him until I had followed out all its consequences to ascertain whether they were consistent with it. I should then, when the proper time arrived, defend the hypothesis, assuming some other hypothesis yet more general, *such as appeared to me to be best*, until I came to something fully sufficient. But I would not permit myself to confound the discussion of the hypothesis itself with the discussion of its consequences. This is a method which cannot lead to truth, though it is much practised by disputants who pride themselves on their ingenuity when they thus throw things into confusion.'*

This resolution of hypotheses into hypotheses of greater generality in an ascending progression until some indisputable axiomatic truth is reached, is the point of departure in the Platonic system from the formula of Protagoras, 'Man is the measure of all things.' It affirms a possibility of absolute truth; escapes from the scepticism inherent in the doctrine of the relativity of knowledge, by the confidence in the truth of universal propositions. But it should be remarked that Plato gradually worked his way to this point. At the time when he composed the *Phædo* he had not seen the importance of this position; indeed, he then held the Ideal Theory only as an hypothesis. Later on, in the *Republic*, he regards every hypothesis as a mere ladder by which to ascend into a region above hypothesis, the Region of First Principles; and he there blames mathematicians because they render no account of the hypotheses from which they start. In the *Timæus* he declares that propositions are equivalent to the natures they affirm, and that those which

* These passages are paraphrases rather than translations from the *Phædo*, which are given by Mr. Grote, and which I have in turn slightly modified.

relate only to Essences and Ideas, are indisputable; those which relate to the world of Sense, dealing only with copies of Ideas, are less and less trustworthy in proportion to their sensuous nature: they are at the best only probabilities, whereas universal propositions are primary truths, seen to be such by intuition.

'The dove cleaving the thin air,' says Kant, 'and feeling its resistance, might suppose that in airless space her movements would be more rapid. Precisely in this way Plato thought that by abandoning the sensuous world, because of the limits it placed to his understanding, he might more successfully venture into the void space of pure intellect.'*

Socrates, as we have shown, relied upon the Inductive or Analogical reasoning, and on Definitions, as the two principles of investigation. The incompleteness of these principles we have already pointed out; and Plato himself found it necessary to enlarge them.

Definitions form the basis of all Philosophy. To know a thing you must also know what it is *not*. In ascertaining the real Definition, Socrates employed his *accoucheur's* art (*τέχνη μαϊευτική*), and proceeded inductively. Plato also used these arts; but he added to them the more efficient processes of Analysis and Synthesis, of Generalization and Classification.†

Analysis, which was first insisted on by Plato as a philosophic process, is the decomposition of the whole into its separate parts; whereby, after examining those parts attentively, the idea of the whole is correctly ascertained. To use Platonic language, Analysis is seeing the One in the Many. Thus, if the subject be Virtue, the general term Virtue must first be decomposed into all its parts, i.e. into all the Virtues; and from a thorough examination of the Virtues a clear idea of Virtue may be attained.‡

It is remarkable that in all the Dialogues, no matter how various their object and opinions, he is always found insisting

* KANT, *Kritik*; *Einleitung*.

† Consult VAN HEUSDE, *Initia Philosoph. Platonice*, ii. pars 97, 98.

‡ A good example of his mode of conducting an inquiry may be seen in the *Gorgias*.

on the relation of universals to particulars. To detect the One in the Many is the constant aim. He is always interrogating the meaning of general terms and abstractions embodied in popular language. And Plato was not only here opening a road towards the establishment of formal logic, but was conscious that he was opening such a road.

Perhaps the most consistent opinion maintained by him was that on Classification—the search for the One in the Many and the Many in the One—the breaking down of an extensive genus into species and sub-species—which Mr. Grote believes to have been an important novelty in those days. 'If we transport ourselves back to his time, I think that such a view of the principles of classification implies a new and valuable turn of thought. There existed then no treatises of logic; no idea of logic as a scheme of mental procedure; no sciences out of which it was possible to abstract the conception of a regular method more or less diversified. On no subject was there any mass of facts or details collected large enough to demand some regular system for the purpose of arranging and rendering them intelligible. Classification to a certain extent is of necessity involved, consciously or unconsciously, in the use of general terms. But the process itself had never been made a subject of distinct consciousness or reflection to any one (as far as our knowledge reaches) in the time of Plato. No one had yet looked at it as a process, natural indeed to the human intellect up to a certain point and in a loose manner, but capable both of great extension and great improvement, and requiring especial study, with an end deliberately set before the mind, in order that it might be employed with advantage to equalize and render intelligible even common and well-known facts.' The fundamental principle of classification—that it should be objective and founded on the relations of objects, not subjective and founded on the relations of objects to us—Plato very distinctly grasped. Goethe has made it the matter of an interesting essay, *Der Versuch als Vermittler von Object und Subject*, not, indeed, in reference

to classification, but to philosophic inquiry generally. The tendency of the uncultivated mind is always to classify things on emotional rather than on intellectual grounds. The groups of objects thrown together in such minds, and conceived in immediate association, are such as to suggest the same or kindred emotions; pleasure or pain, love or hatred, hope or fear, admiration, contempt, disgust, jealousy, ridicule. Community of emotion is a stronger bond of association between different objects than community in any attribute not immediately interesting to the emotions, and appreciable only intellectually. Those objects which have nothing else in common except appeal to the same earnest emotion will often be called by the same general name, and will be constituted members of the same class. To attend to attributes in any other point of view than in reference to the amount and kind of emotion which they excite is a process uncongenial to the ordinary taste. It is against this natural propensity that Plato enters his protest in the name of intellect and science. For the purpose of obtaining a classification founded on real intrinsic affinities we must exclude all reference to the emotions; we must take no account whether a thing be pleasing or hateful, sublime or mean; we must bring ourselves to rank objects useful or grand in the same logical compartment with objects hurtful or ludicrous.

Definitions were to Plato what general or abstract ideas were to later metaphysicians. The individual thing was held to be transitory and phenomenal, the abstract idea was eternal. Only concerning the latter could philosophy occupy itself. But Socrates, although insisting on proper Definitions, had no conception of the classification of those Definitions which must constitute philosophy. Plato, therefore, by the introduction of this process, shifted philosophy from the ground of inquiries into man and society to that of Dialectics. What was Dialectics? It was the art of *discoursing*, i.e. the art of thinking, i.e. logic. Plato uses the word Dialectics, because with him Thinking was a silent

discourse of the soul, and differed from speech only in being silent.

Dialectics (or, in modern phrase, Ontology) comprised the highest cognitions. Truth belongs exclusively to them. But there were other, inferior sciences, which, having more or less affinity to Dialectics, may be classified accordingly. Mathematics approaches them most nearly; but they are not perfect. Hear what is said in the *Republic**:—

‘You will understand me more easily when I have made some previous observations. I think you know that the students of subjects like geometry and calculation, assume by way of materials, in each investigation, all odd and even numbers, figures, three kinds of angles, and other similar data. These things they are supposed to know, and having adopted them as hypotheses, they decline to give any account of them, either to themselves or to others, on the assumption that they are self-evident; and, making these their starting point, they proceed to travel through the remainder of the subject, and arrive at last, with perfect unanimity, at that which they have proposed as the object of investigation.

‘I am perfectly aware of the fact, he replied.

‘Then you also know that they summon to their aid visible forms, and discourse about them, though their thoughts are busy not with these forms, but with their originals, and though they discourse not with a view to the particular square and diameter which they draw, but with a view to the absolute square and the absolute diameter, and so on. For while they employ by way of images those figures and diagrams aforesaid, which again have their shadows and images in water, they are really endeavouring to behold those abstractions which a person can only see with the eye of thought.

‘True.

‘This, then, was the class of things which I called intellectual; but I said that the soul is constrained to employ hypo-

* Translated by MESSRS. DAVIES and VAUGHAN.

theses while engaged in the investigation of them—not travelling to a first principle (because it is unable to step out of, and mount above, its hypotheses), but using, as images, the actual objects that are copied by the things below—which objects, as compared with the copies, have a reputation for clearness, and are held in esteem.

‘I understand you to be speaking of the subject-matter of geometry, and its kindred arts.

‘Again, by the second segment of the intellectual world understand me to mean all that the mere reasoning process apprehends by the force of dialectic, when it avails itself of hypotheses not as first principles, but as genuine hypotheses, that is to say, as stepping-stones and impulses, whereby it may force its way up to something that is not hypothetical, and arrive at the first principle of everything, and seize it in its grasp; which done, it turns round, and takes hold of that which takes hold of this first principle, till at last it comes down to a conclusion, calling in the aid of no sensible object whatever, but simply employing abstract, self-subsisting forms, and terminating in the same.

‘I do not understand you so well as I could wish, for I believe you to be describing an arduous task; but at any rate I understand that you wish to declare distinctly, that the field of real existence and pure intellect, as contemplated by the science of dialectic, is more certain than the field investigated by what are called the arts, in which hypotheses constitute first principles, which the students are compelled, it is true, to contemplate with the mind and not with the senses; but, at the same time, as they do not come back, in the course of inquiry, to a first principle, but push on from hypothetical premisses, you think that they do not exercise pure reason on the questions that engage them, although taken in connexion with a first principle these questions come within the domain of the pure reason. And I believe you apply the term understanding, not pure reason, to the mental habit of such people as geometers—regarding understanding as something intermediate between opinion and pure reason.’

From this brief outline of Plato's Method may be seen how erroneous is the notion which supposes that his merit was exclusively literary. He was pre-eminently a severe Dialectician. This is his leading peculiarity; but he has clothed his method in such attractive forms that the means have been mistaken for the end. His great dogma, like that of his master, Socrates, was the necessity of an untiring investigation into general terms (or abstract ideas).

‘The natural tendency of the real lover of knowledge is to strain every nerve to reach real existence; and far from resting at those multitudinous particular phenomena whose existence falls within the region of opinion, he presses on, undiscouraged, and desists not from his passion, till he has apprehended the nature of each thing as it really is, with that part of his soul whose property it is to lay hold of such objects, in virtue of its affinity to them;—and having, by means of this, verily approached and held intercourse with that which verily exists, he begets wisdom and truth, so that then, and not till then, he knows, enjoys true life, and receives true nourishment, and is at length released from his travail-pangs.’

He did not look on life with the temporary interest of a passing inhabitant of the world. He looked on it as an immortal soul longing to be released from its earthly prison, and striving to catch by anticipation some faint glimpses of that region of eternal Truth where it would some day rest. The fleeting phenomena of this world he knew were nothing more; but he was too wise to overlook them. Fleeting and imperfect as they were, they were the indications of that eternal Truth for which he longed, footmarks on the perilous journey, and guides to the wished-for goal. Long before him wise and meditative men perceived that sense-knowledge would only be knowledge of phenomena; that everything men call Existence was but a perpetual flux—a something which, always *becoming*, never *was*; that the reports which our senses made of these things partook of the same fleeting and uncertain character. He could

not, therefore, put his trust in them; he could not believe that Time was anything more than the wavering image of Eternity.

The transitory phenomena were not true existences; but they were *images* of true existences. Interrogate them; classify them; discover what qualities they have in common; discover that which is invariable, necessary, amidst all that is variable, contingent; discover The One in the Many, and you have penetrated the secret of Existence.*

To reduce this Platonic language to a modern formula: Things exist as classes and as individuals. These classes are but species of higher classes; e.g. men are individuals of the class Man, and Man is a species of the class Animal. But Philosophy, which is deductive, has nothing to do with individuals; it is occupied solely with classes. General Terms, or abstract ideas, are therefore the materials with which Philosophy works.

We are here led to the origin of the famous dispute of Realism and Nominalism, which may be summed up in a sentence. The Realists maintain, that every General Term (or Abstract idea), such as Man, Virtue, &c., has a real and independent existence, quite irrespective of any concrete individual determination, such as Smith, Benevolence, &c. The Nominalists, on the contrary, maintain that all General Terms are but the creations of the mind, designating no distinct entities, being merely used as *marks* of aggregate conceptions.

In Realism, Plato separated himself from his master Socrates. On this point we have the indubitable, but hitherto little noticed, testimony of Aristotle, who, after speaking of the Socratic Method of Induction and Definition, says:—'But Socrates gave neither to General Terms nor to Definitions a distinct existence.'† This is plain

* To refer the reader to particular passages wherein this doctrine is expressed, or implied, would be endless: it runs through nearly all his works. Perhaps the easiest passage where it may be read is *Philebus*, pp. 233-6.

† *Met.* xiii. 4, 'ἀλλ' ὁ μὲν Σωκράτης τὰ καθόλου οὐ χωριστὰ ἐποίει, οὐδὲ τοὺς ὁρισμούς.—The wording of this may appear strange. Many have supposed

enough. Aristotle, in continuation, obviously speaks of Plato:—'Those who succeeded him gave to these General Terms a separate existence, and called them *Ideas*.'

It will be seen in this sketch of the Method that Plato really took an important step in advance, not only by the foundations which he may be said to have laid for a science of Logic, but also by rescuing Philosophy from the dissolving tendencies of scepticism in the reassertion of its claim to Certitude. Whether the criterion which he advanced were or were not a valid one, is another question; that belongs to Philosophy; but History at least will recognise that the claim was made, and for centuries was accepted. If the Subjective Method is a pathway to the truth, if Logic is the organon of discovery, if ideas are the measures of existences, if the external order corresponds with the internal order, and everything exists as we think it, then Plato's claim is irresistible. Up to his time there had been dogmatism and scepticism; he first saw the necessity of controlling dogmatism by scepticism, while the final conclusions of research must nevertheless be dogmatic and based upon a criterion of certitude. If in his own researches he vacillated, he did not vacillate as to the integrity of his Method. He was assured that there was a ground of certitude, assured that this was in universal propositions; to arrive at such propositions was therefore the aim of research. Socrates took up the purely negative side. Plato looked on this as the indispensable prelude to an affirmative attitude, and by his criterion he gave a logical basis to the Subjective Method.

universals to exist separately; but how a separate existence could be given to Definitions may puzzle the stoutest Realist. The difficulty vanishes, if we understand that the Platonic Definitions and Universals were the same things; Aristotle's phrase is, however, ambiguous.

CHAPTER IV.

PLATONIC THEORIES.

ALTHOUGH there is no Platonic system properly so called, nor any theories that can be said to have held more than a temporary hold of his sceptical and progressive intellect, since even those that most frequently recur are variously conceived by him, and the description which would be accurate if drawn from one Dialogue, would be inaccurate if applied to the same theory in another, there are, nevertheless, certain theories which have become famous as Platonic, and which, because they have exercised great influence on the course of speculative development, must be briefly expounded here.

The word Idea has undergone more changes than almost any word in philosophy; and nothing can well be more opposed to the modern sense of the word than the sense affixed to it by Plato. If we were to say, that *Ideas* were tantamount to the *Substantial Forms* of the schoolmen, we should run the risk of endeavouring to enlighten an obscurity by an obscurity no less opaque. If we were to say, that the Ideas were tantamount to *Universals*, the same objection might be raised. If we were to say, that the Ideas were *General Terms* or *Abstract Ideas*, we should mislead every Nominalist into the belief that Plato was an 'Idealist;' otherwise the last explanation would be pertinent.

It will be better, however, to describe first, and to define afterwards. Plato, according to Aristotle, gave to General Terms a distinct existence, and called them Ideas. He became a Realist; and asserted that there was the Abstract Man no less than the Concrete Men: the latter were Men

only in as far as they participated in the Ideal Man. No one will dispute that we have a conception of a genus—that we do conceive and reason about Man quite independently of Smith or Brown, Peter or Paul. If we have such a conception, whence did we derive it? Our experience has only been of the Smiths and Browns, the Peters and Pauls; we have only known *men*. Our senses tell us nothing of Man. Individual objects only give individual knowledge. A number of stones placed before us will afford us no knowledge, will not enable us to say, These are stones; unless we have previously learned what is the nature of Stone. So, also, we must know the nature of Man, before we can know that Jones and Brown are Men. We do know Man, and we know Men; but our knowledge of the former is distinct from that of the latter, and must have a distinct source; so, at least, thought the Realists. What is that source? Reflection, not sense.

The Realists finding The One in The Many,—in other words, finding certain characteristics common to all men, and not only common to them but necessary to their being Men,—abstracted these *general* characteristics from the *particular* accidents of individual men, and out of these characteristics made what they called *Universals* (what we call genera). These *Universals* exist *per se*. They are not only conceptions of the mind; they are entities; and our perceptions of them are formed in the same manner as our perceptions of other things.

If the conception of genera be rendered objective, the Realist doctrine is explained. Our *conceptions* were held by Realism to be *perceptions* of existing Things; these Plato called Ideas, the only real existences: they were the *noumena* of which all individual things were the *phenomena*. If then we define the Platonic 'Idea' to be a 'Noumenon,' or 'Substantial Form,' we shall not be far wrong: and most of the disputes respecting the real meaning of the term will be set aside; for example, Ritter's account of the word—in which he is at a loss to say whether Idea means the universal, or

whether it does not also mean the individual. That Plato usually designates a General Term by the word Idea, there can be no doubt; there can be no doubt also that he sometimes designates the essence of some individual thing an Idea, as in the *Republic*, where he speaks of the Idea of a Table from which all other Tables were formed. There is no contradiction in this:—a general form is as necessary for Tables as for Men: this Idea, therefore, equally partakes of generality, even where exemplified by particular things.

Aristotle, in a memorable passage, says:—‘Plato followed Socrates respecting definitions, but, accustomed as he was to inquiries into universals (διὰ τὸ ζητῆσαι περὶ τῶν καθόλου), he supposed that definitions should be those of *intelligibles* (i.e. noumena), rather than of *sensibles* (i.e. phenomena): for it is impossible to give a general definition to sensible objects, which are always changing. Those Intelligible Essences he called Ideas; adding that sensible objects were different from Ideas, and received from them their names; for it is in consequence of their *participation* (κατὰ μέθεξιν) in Ideas, that all objects of the same genus receive the same name as the Ideas. He introduced the word participation. The Pythagoreans say, that “Things are the copies of Numbers.” Plato says, “the participation;” he only changes the name.’*

It may be affirmed that Plato did more than change a name. The conception alone of Ideas, as generical types, is a great advance on the conception of Numbers. But Plato did not stop here. He ventured on an explanation of the nature and the degree of that participation of sensible objects in Ideas. And Aristotle himself, in another place, points out a fundamental distinction. ‘Plato thought that sensible Things no less than their causes were Numbers; but the causes are *Intelligibles* (i.e. Ideas), and other things *Sensibles*.’† This gives a new character to the theory; it renders it at once more clear and more applicable.

* *Metaph.* i. 6.

† *Metaph.* i. 7, ‘Ἀλλὰ τοὺς μὲν νοητοὺς αἰτίους, τοὺς δὲ αἰσθητοὺς.

The greatest difficulty felt in the Ideal theory is that of participation. How, and in how far, does this participation take place? A question which Plato did not, and could not, solve. All that he could answer was, that human knowledge is necessarily imperfect, that sensation troubles the intellectual eye, and only when the soul is free from the hindrances of the body shall we be able to discern things in all the ineffable splendour of truth. But, although our knowledge is imperfect, it is not false. Reason enables us to catch some glimpses of the truth, and we must endeavour to gain more. Whatever is the object of the soul's thought, purely as such, is real and true. The problem is to separate these glimpses of the truth from the prejudices and errors of mere opinion.

In this doctrine, opinion is concerned only with Appearances (phenomena): philosophy, with Existence. Our sensation, judgments, opinions, have only reference to τὰ γιγνόμενα; our philosophic conceptions have reference to τὰ ὄντα. The whole matter is comprised in Plato's answer to Diogenes, who thought he demolished the theory of Ideas by exclaiming, ‘I see indeed a table; but I see no Idea of a table.’ Plato replied, ‘Because you see with your eyes, and not with your reason.’ Hence, at the close of the 5th Book of his *Republic*, he says that those only are to be called Philosophers who devote themselves to the contemplation of τὸ ὄν, i.e. Existence.

‘When a man knows, does he know something or nothing? Be so good, Glaucon, as to make answer in his behalf.

‘My answer will be, that he knows something.

‘Something that exists or does not exist?

‘Something that exists: for how could a thing that does not exist be known?

‘Are we then quite sure of this fact, in whatever variety of ways we might examine it, that what completely exists may be completely known, whereas that which has no existence at all must be wholly unknown?

‘We are perfectly sure of it.

'Good; now, if there be anything so constituted, as at the same time to be and not to be, must it not lie somewhere between the purely existent and the absolutely non-existent?

'It must.

'Well then, as knowledge is correlative to the existent, and the negation of knowledge necessarily to the non-existent, must we not try to find something intermediate between science and ignorance, if there is anything of the kind, to correspond to this that is intermediate between the existent and the non-existent?

'Yes, by all means.

'Do we speak of opinion as a something?

'Undoubtedly we do.

'Do we consider it a faculty distinct from science or identical with it?

'Distinct from it.

'Therefore opinion is appointed to one province and science to another, each acting according to its own peculiar power.

'Just so.

'Is it not the nature of science, as correlative to the existent, to know how the existent exists? But first there is a distinction which I think it necessary to establish.

'What is that?

'We shall hold that faculties, as a certain general class, are the things whereby we, and every other thing, are able to do whatever we can do; for example, I call sight and hearing faculties, if you happen to understand the special conception which I wish to describe.

'I do understand it.

'Then let me tell you what view I take of them. In a faculty I do not see either colour or form, or any of those qualities that I observe in many other things, by regarding which I can in many cases distinguish to myself between one thing and another. No, in a faculty I look only to its province and its function, and thus I am led to call it in each case by this name, pronouncing those faculties to be identical whose provinces and functions are identical, and those diverse whose

provinces and functions are diverse. But pray how do you proceed?

'Just in the same way.

'Now then, return with me, my excellent friend. Under what general term do you class science? Do you make it a faculty?

'Yes I do; it is of all the faculties the most powerful.

'Well, is opinion a faculty; or are we to refer it to some other denomination?

'Not to any other; for that whereby we are able to opine, can only be opinion.

'Well, but a little while ago you admitted that science and opinion are not identical.

'Why how could a sensible man identify the fallible with the infallible?

'Very good: so we are clearly agreed that opinion is a thing distinct from science.

'It is.

'If so, each of them has by its nature a different province, and a different efficacy.

'The inference is inevitable.

'Science, I believe, has for its province to know the nature of the existent.

'Yes.

'And the province of opinion is, we say, to opine.

'Yes.

'Does opinion take cognizance of precisely that material which science knows? In other words, is the object-matter of opinion identical with that of science? or is that impossible?

'It is impossible, after the admissions we have made; that is, if it be granted that different faculties have different provinces, and that both opinion and science are faculties, and that the two are distinct,—all which we affirm. These premises make it impossible to identify the object-matter of science and that of opinion.

'Then, if the existent is the object-matter of knowledge, that of opinion must be something other than the existent?

'It must.

'Well then, does opinion exercise itself upon the non-existent, or is it impossible to apprehend even in opinion that which does not exist? Consider—does not the person opining carry his thought towards something? Or is it possible to have an opinion, but an opinion about nothing?

'It is impossible.

'Then the person who opines has an opinion about some one thing?

'Yes.

'Well, but the non-existent could not be called some one thing; it might, on the contrary, with the greatest truth be styled nothing.

'Just so.

'But to the non-existent we were constrained to assign ignorance, and to the existent, knowledge.

'And rightly.

'Then neither the existent nor the non-existent is the object of opinion?

'No.

'Therefore opinion cannot be either ignorance or knowledge.

'Apparently not.

'Then does it lie beyond either of these, so as to surpass either knowledge in certainty or ignorance in uncertainty?

'It does neither.

'Then tell me, do you look upon opinion as something more dusky than knowledge, more luminous than ignorance?

'Yes, it is strongly so distinguished from either.

'And does it lie within these extremes?

'Yes.

'Then opinion must be something between the two.

'Precisely so.

'Now a little while back, did we not say, that if anything could be found so constituted as at the same time to be and not to be, it must lie between the purely existent and the

absolutely not existent, and must be the object neither of science nor yet of ignorance, but of a third faculty, which should be similarly discovered in the interval between science and ignorance?

'We did.

'But now we have discovered between these two a faculty which we call opinion.

'We have.

'It will remain then for us, apparently, to find what that is which partakes both of being and of not being, and which cannot be rightly said to be either of these absolutely: in order that, should it discover itself to us, we may justly proclaim it to be the object of opinion; thus assigning extremes to extremes, and means to means. Am I not right?'

'Hence we have discovered, apparently, that the mass of notions, current among the mass of men, about beauty, justice, and the rest, roam about between the confines of pure existence and pure non-existence.

'We have.

'And we before admitted, that if anything of this kind should be brought to light, it ought to be described as the object of opinion and not of knowledge,—these intermediate rovers being caught by the intermediate faculty.

'We did make this admission.

'Therefore, when people have an eye for a multitude of beautiful objects, but can neither see beauty in itself, nor follow those who would lead them to it,—when they behold a number of just things, but not justice in itself, and so in every instance, we shall say they have in every case an opinion, but no real knowledge of the things about which they opine.

'It is a necessary inference.

'But what, on the other hand, must we say of those who contemplate things as they are in themselves, and as they exist ever permanent and immutable? Shall we not speak of them as knowing, not opining?

'That also is a necessary inference.

'Then shall we not assert that such persons admire and

love the objects of knowledge,—the others, the objects of opinion? For we have not forgotten, have we, that we spoke of these latter as loving and looking upon beautiful sounds and colour and the like, while they will not hear of the existence of an abstract beauty?

'We have not forgotten it.

'Shall we commit any fault then, if we call these people philodoxical rather than philosophical, that is to say, lovers of opinion rather than lovers of wisdom? And will they be very much offended with us for telling them so?

'No, not if they will take my advice: for it is wrong to be offended with the truth.

'Those therefore that set their affections on that which in each case really exists, we must call not philodoxical, but philosophical?

'Yes, by all means.*

The phenomena which constitute what we perceive of the world (i.e. the world of sense) are but the resemblances of matter to Ideas. In other words, Ideas are the forms of which material Things are copies; the *noumena*, of which all that we perceive are the Appearances (phenomena). But we must not suppose these copies to be exact; they do not at all participate in the nature of their models; they do not even represent them, otherwise than in a superficial manner. Or perhaps it would be more correct to say, that Ideas do not resemble Things; the man does not resemble his portrait, although the portrait may be a tolerable resemblance of him; a resemblance of his aspect, not of his nature. If, then, the Ideas as they exist realized in Nature do not accurately resemble the Ideas as they exist *per se*—i.e. if the phenomena are not exact copies of the noumena—how are we ever to attain a knowledge of Ideas and of Truth? This question carries us to his psychology, which we must first explain before the whole conception of the Ideal theory can be made consistent.

In the *Phædrus* Socrates very justly declares his inability

* I have availed myself of the excellent translation of the *Republic*, by Messrs. DAVIES and VAUGHAN.

to explain the real nature of the soul. But though he cannot exhibit it, he can show what it resembles. Unable to give a demonstration, he can paint a picture: and that picture he paints as follow:—

'We may compare it to a chariot, with a pair of winged horses and a driver. In the souls of the Gods, the horses and the drivers are entirely good: in other souls only partially so, one of the horses excellent, the other vicious. The business, therefore, of the driver is extremely difficult and troublesome.

'Let us now attempt to show how some living beings came to be spoken of as mortal, and others as immortal. All souls are employed in taking care of the things which are inanimate; and travel about the whole of heaven in various forms. Now, when the soul is perfect, and has wings, it is carried aloft, and helps to administer the entire universe; but the soul which loses its wings, drops down until it catches hold of something solid, in which it takes up its residence; and, having a dwelling of clay, which seems to be self-moving on account of the soul which is in it, the two together are called an animal, and mortal. The phrase "immortal animal" arises not from any correct understanding, but from a fiction: never having seen, nor being able to comprehend, a deity, men conceived an immortal being, having a body as well as a soul, united together for all eternity. Let these things, then, be as it pleases God: but let us next state from what cause a soul becomes unfledged.

'It is the nature of wings to lift up heavy bodies towards the habitation of the Gods; and, of all things which belong to the body, wings are that which most partakes of the divine. The divine, includes the beautiful, the wise, the good, and everything of that nature. By these the wings of the soul are nourished and increased; by the contraries of these, they are destroyed.

'Jupiter, and the other Gods, divided into certain bands, travel about in their winged chariots, ordering and attending to all things, each according to his appointed function; and

all who will, and who can, follow them. When they go to take their repasts, they journey towards the summit of the vault of heaven. The chariots of the Gods, being in exact equilibrium, and therefore easily guided, perform this journey easily, but all others with difficulty; for one of the two horses, being of inferior nature, when he has not been exceedingly well trained by the driver, weighs down the vehicle, and impels it towards the earth.

'The souls which are *called* immortal (viz. the Gods), when they reach the summit, go through, and, standing upon the convex outside of heaven, are carried round and round by its revolution, and see the things which lie beyond the heavens. No poet has ever celebrated these supercelestial things, nor ever will celebrate them, as they deserve. This region is the seat of *Existence* itself: Real Existence, colourless, figureless, and intangible Existence which is visible only to Mind, the charioteer of the soul, and which forms the subject of Real Knowledge. The minds of the Gods, which are fed by pure knowledge, and all other thoroughly well-ordered minds, contemplate for a time this universe of 'Being' *per se*, and are delighted and nourished by the contemplation, until the revolution of the heavens brings them back again to the same point. In this circumvolution, they contemplate Justice itself, Temperance itself, and Knowledge; not that knowledge which has a generation or a beginning, not that which exists in a subject which is any of what we term beings, but that Knowledge which exists in Being in general; in that which really Is. After thus contemplating all real existences, and being nourished thereby, these souls again sink into the interior of the heavens, and repose.

'Such is the life of the Gods. Of other souls, those which best follow the Gods, and most resemble them, barely succeed in lifting the head of the charioteer into the parts beyond the heavens, and, being carried round by the circumvolution, are enabled with difficulty to contemplate this universe of Self-Existence. Others, being encumbered by the horses,

sometimes rising and sometimes sinking, are enabled to see some Existences only. The remainder only struggle to elevate themselves, and, by the unskilfulness of their drivers, coming continually into collision, are lamed, or break their wings, and, after much labour, go away without accomplishing their purpose, and return to feed upon mere opinion.

'The motive of this great anxiety to view the supercelestial plain of Truth is that the proper food of the soul is derived from thence, and, in particular, the wings, by which the soul is made light and carried aloft, are nourished upon it. Now it is an inviolable law that any soul which, placing itself in the train of the Gods, and journeying along with them, obtains a sight of any of these self-existent Realities, remains exempt from all harm until the next circumvolution, and, if it can contrive to effect this every time, it is for ever safe and uninjured. But if, being unable to elevate itself to the necessary height, it altogether fails of seeing these realities, and, being weighed down by vice and oblivion, loses its wings and falls to the earth, it enters into and animates some Body. It never enters, at the first generation, into the body of a brute animal; but that which has seen most enters into the body of a person who will become a lover of wisdom, or a lover of beauty, or a person addicted to music, or to love; the next in rank, into that of a monarch who reigns according to law, or a warrior, or a man of talents for command; the third, into a person qualified to administer the State, and manage his family affairs, or carry on a gainful occupation; the fourth, into a person fond of hard labour and bodily exercises, or skilled in the prevention and curing of bodily diseases; the fifth, into a prophet or a teacher of religious ceremonies; the sixth, into a poet, or a person addicted to any other of the imitative arts; the seventh, into a husbandman or an artificer; the eighth, into a sophist, or a courtier of the people; the ninth, into a despot and usurper. And, in all these different fortunes, they who conduct themselves justly will obtain next time a more eligible lot; they who conduct themselves unjustly, a worse. The

soul never returns to its pristine state in less than ten thousand years, for its wings do not grow in a shorter time; except only the soul of one who philosophizes with sincerity, or who loves with philosophy. Such souls, after three periods of one thousand years, if they choose thrice in succession this kind of life, recover their wings in the three thousandth year, and depart. The other souls, at the termination of their first life, are judged, and, having received their sentence, are either sent for punishment into the places of execution under the earth, or are elevated to a place in heaven in which they are rewarded according to the life which they led while here. In either case they are called back on the thousandth year, to choose or draw lots for a new life. Then a human soul often passes into the body of a beast, and that of a beast, if it has ever been human, passes again into the body of a man; for a soul which has never seen the Truth at all cannot enter into the human form, it being necessary that man should be able to apprehend many things according to *kinds*, which kinds are composed of many perceptions combined by reason into *one*. Now, this mode of apprehending is neither more nor less than the *recollecting* of those things which the soul formerly saw when it journeyed along with the Gods, and, disregarding what we now call beings, applied itself to the apprehension of Real Being. It is for this reason that the soul of the philosopher is refledged in a shorter period than others; for, it constantly, to the best of its power, occupies itself in trying to recollect those things which the Gods contemplated, and by the contemplation of which they are Gods; by which means being lifted out of, and above, human cares and interests, he is, by the vulgar considered as mad while in reality he is inspired.'

This is unquestionably the poetry of philosophy, and it is from such passages that the popular opinion respecting Plato has been formed; but they represent only a small portion of the real thinker. Towards the close the reader will have remarked that the famous doctrine of *reminiscence*

is implied. This doctrine may be seen fully developed in the *Phædo*. The difficulties of conceiving the possibility of any knowledge other than the sense-knowledge, which the Sophists had successfully proved to lead to scepticism, must early have troubled Plato's mind. If we know nothing but what our senses teach us, then is all knowledge trivial. Those who admit the imperfection of the senses and fall back upon Reason, beg the question. How do we know that Reason is correct? How can we be assured that Reason is not subject to some such inevitable imperfection as that to which sense is subject?

Here the ever-recurring problem of human knowledge presents itself. Plato was taught by Socrates that beyond the world of Sense, there was the world of eternal Truth; that men who differed greatly respecting individual things did not differ respecting universals; that there was a common fund of Truth, from which all human souls drew their share. Agreeing with his master that there were certain principles about which there could be no dispute, he wished to know how he came by those principles.

All who have examined the nature of our knowledge, are aware that it is partly made up of direct impressions received by the senses, and partly of ideas which never were, at least in their ideal state, perceived by the senses. It is this latter part which has agitated the schools. On the one side, men have declared it to be wholly independent of the senses—to be the pure action of the soul. In its simplest form, this doctrine may be called the doctrine of innate ideas. On the other side, men have as vigorously argued that, although all our ideas were not absolutely derived from the senses in a direct manner, yet they were all so derived in an indirect manner; thus, we have never *seen* a mermaid; but we have seen both a fish and a woman, and to combine these two impressions is all that the mind does in conceiving a mermaid.

Plato, in adopting the former view, rendered it more cogent than most of his successors; for is it not somewhat

gratuitous to say, we are born with such and such ideas? It is different from saying we are born with certain faculties: *that* would be admissible. But to be driven into a corner, and on being asked, whence came those ideas? to answer, they are innate,—is a pure *petitio principii*. What proof have you that they are innate? Merely the proof that you cannot otherwise account for them.

Plato was more consistent. He said The Soul is and ever was immortal. In its anterior states of existence it had accurate conceptions of the eternal Truth. It was face to face with Existence. Now, having descended upon earth, having passed into a body, and, being subject to the hindrances of that bodily imprisonment, it is no longer face to face with Existence; it can see Existence only through the ever-changing flux of material phenomena. The world is only *becoming*, never *is*. The Soul would apprehend only the *becoming*, had it not some recollection of its anterior state—had it not in some sort the power of tracing the unvarying Idea under the varying phenomena. When, for example, we see a stone, all that our senses convey is the appearance of that stone: but, as the stone is large or small, the soul apprehends the Idea of Greatness; and this apprehension is a reminiscence of the world of Ideas, awakened by the sensation. So when we see or hear of a benevolent action, besides the fact, our Soul apprehends the Idea of Goodness. And all our recollection of Ideas is performed in the same way. It is as if in our youth we had listened to some mighty orator whose printed speech we are reading in old age. That printed page, how poor and faint a copy of that thrilling eloquence! how we miss the speaker's piercing, vibrating tones, his flashing eye, his flashing face! And yet that printed page in some dim way recalls those tones, recalls that face, and stirs us somewhat as we then were stirred. Long years and many avocations have somewhat effaced the impression he first made, but the printed words serve faintly to recall it. Thus it is with our immortal Souls. They have sojourned in that celestial region where

the voice of Truth rings clearly, where the aspect of Truth is unveiled, undimmed. They are now sojourning in this fleeting, flowing river of life, stung with resistless longings for the skies, and solaced only by the reminiscences of that former state which these fleeting, broken, incoherent images of Ideas awaken in them.

It is a mistake to suppose this a mere poetical conception. Plato never sacrifices logic to poetry. If he sometimes calls poetry to his aid, it is only to express by it those ideas which logic cannot grasp, ideas which are beyond demonstration; but he never indulges in mere fancies. Instead therefore of saying that Reason was occupied with innate ideas, he consistently said that everything which the senses did not furnish was a reminiscence of the world of Ideas.

We are now in a condition to answer the question with which the last Section was closed,—How to ascertain the Truth, if Phenomena are not exact copies of Noumena? The sensation awakens recollection, and the recollection is of Truth; the soul is confronted with the many by means of Sense, and by means of Reason it detects the One in the Many; i.e. the particular things perceived by Sense awaken the recollection of Universals or Ideas. But this recollection of Truth is always more or less imperfect. Absolute Truth is for the Gods alone. No man is without some of the divine spark. Philosophers alone have any large share; and they might increase it by a proper method.

The philosophy of Plato has two distinct branches, somewhat resembling what we found in Parmenides. The universe is divided into two parts: the celestial region of Ideas, and the mundane region of material phenomena. These answer very well to the modern conception of Heaven and Earth. As the phenomena of matter are but copies of Ideas (not, as some suppose, their bodily *realization*), there arises a question: How do Ideas become Matter? In other words: How do Things participate in Ideas? We have already mooted the question, intimating that it admitted of no satis-

factory solution; nor does it; and we must not be surprised to find Plato giving, at different times, two very different explanations. These two explanations are too curious to be overlooked. In the *Republic*, he says that God, instead of perpetually creating individual things, created a distinct type (Idea) for each thing. From this type all other things of the class are made. Thus, God made the Idea of a bed: according to this type, any carpenter may now fashion as many beds as he likes, in the same way as an artist may imitate in his paintings the types already created, but cannot himself create anything new. The argument, as an illustration of Plato's Method, may be given here:—

'Shall we proceed according to our usual Method? That Method, as you know, is the embracing under one general Idea the multiplicity of things which exist separately, but have the same name. You comprehend?

'Perfectly.

'Let us take anything you like. For instance, there is a multiplicity of beds and tables?

'Certainly.

'But these two kinds are comprised, one under the Idea of a bed, and the other under the Idea of a table?

'Without doubt.

'And we say that the carpenter who makes one of these articles, makes the bed or the table according to the Idea he has of each. For he does not make the Idea itself. That is impossible?

'Truly, that is impossible.

'Well, now, what name shall we bestow on the workman whom I am now going to name?

'What workman?

'Him who makes what all the other workmen make separately.

'You speak of a powerful man!

'Patience; you will admire him still more. This workman has not only the talent of making all the works of art, but also all the works of nature; plants, animals, everything

else; in a word, himself. He makes the Heaven, the Earth, the Gods; everything in Heaven, Earth, or Hell.

'You speak of a wonderful workman, truly!

'You seem to doubt me. But, tell me, do you think there is no such workman? or, do you think that in one sense any one could do all this, but in another no one could? Could you not yourself succeed in a certain way?

'In what way?

'It is not difficult; it is often done, and in a short time. Take a mirror and turn it round on all sides: in an instant you will have made the sun and stars, the earth, yourself, the animals and plants, works of art, and all we mentioned.

'Yes, the images, the appearances, but not the real things.

'Very well; you comprehend my opinion. The painter is a workman of this class, is he not?

'Certainly.

'You will tell me that he makes nothing real, although he makes a bed in a certain way?

'Yes; but it is only an appearance, an image.

'And the carpenter, did you not allow that the bed which he made was not the Idea which we call the essence of the bed, the real bed, but only a certain bed?

'I said so, indeed.

'If, then, he does not make the Idea of the bed, he makes nothing real, but only something which represents that which really exists. And, if any one maintain that the carpenter's work has a real existence he will be in error.*

In the *Timæus*, perhaps the most purely expository of all his works, and unquestionably one of the latest, Plato takes a totally different view of the creation of the world. God is there said, not to create types (Ideas); but, these types having existed from all eternity, God in fashioning Chaos fashioned it after the model of these Ideas. In this view there is no participation in the *nature* of Ideas, but only a participation in their *form*.

* *Repub.* x. 467-8, ed. Bekker.

Whichever hypothesis he adopted (and Plato did not much care for either), this conception of Heaven and Earth as two different regions, is completed by the conception of the double nature of the soul; or rather, of two souls: one Rational and the other Sensitive. These two souls are closely connected, as the two regions of Ideas and Phenomena are connected. Neither of them is superfluous; neither of them, in a human sense, sufficient: they complete each other. The Sensitive soul awakens the reminiscences of the Rational soul; and the Rational soul, by detecting the One in the Many, preserves Man from the scepticism inevitably resulting from mere sense-knowledge.

Thus did Plato resume in himself all the conflicting tendencies of his age; thus did he accept each portion of the truth supposed to be discovered by his predecessors, and reconcile these portions in one general tendency. In that vast system, all scepticism and all faith found acceptance: the scepticism was corrected, the faith was propped up by more solid arguments. He admitted, with the sceptics, the imperfection of all sense-knowledge; but, though imperfect, he declared it not worthless: it is no more like the Truth than phenomena are like Ideas; but, as phenomena are in some sort modelled after Ideas, and do, therefore, in some dim way, represent Ideas, so does sense-knowledge lead the patient thinker to something like the Truth; it awakens in him reminiscence of the Truth. As Ritter says, 'He shows, in detail, that in the world of sense there is no perfect likeness, but that an object which at one time appears like, is at another thought to be unlike, and is, therefore, defective in completeness of resemblance, and has at most but a tendency thereto. The same is the case with the Beautiful, the Good, the Just, the Holy, and with all that really is; in the sensible world there is nothing exactly resembling them, neither similar nor dissimilar; all, however, that possesses any degree of correspondence with these true species of being is perceived by us through the senses, and thereby reminds us of what truly is. From this it is clear that he had previously

seen it somewhere, or been conscious of it, and, as this could not have been in the present, it must have been in some earlier state of existence. In this respect there is a close connection between this doctrine and the view of sensible objects, which represents them as mere copies or resemblances of the super-sensible truth; for, even in perception, a feeling arises upon the mind, that all we see or hear is very far from reaching to a likeness to that which is the true being and the absolutely like; but that, striving to attain, it falls short of perfect resemblance; and consequently, the impressions of the sense are mere tokens of the eternal ideas, whose similitude they bear, and of which they are copies.'

The monotheistic tendency of Plato's speculations has been one great source of the veneration in which his works have been held by Christian thinkers. In this there has been exaggeration, and injustice to his predecessors. We have already noticed in Xenophanes an energetic protest against the polytheistic conceptions of his day, a protest far more sweeping than is to be found in Plato, who was, to speak candidly, somewhat of a trimmer, and who carefully abstained from any open disregard of the popular creed. But not only Xenophanes, all the pre-Socratic thinkers were more or less consciously at variance with the popular theology; and the whole current of speculation set towards monotheism, in Greece, as in the East. Although, therefore, we find in Plato a tacit admission of the popular polytheism, we also find his speculations pointing unmistakably towards monotheism; the existence of the inferior Gods was not impugned, but they were subordinated to the Supreme.

In the same way as Plato sought to detect the One amidst the Multiplicity of material phenomena, and, having detected it, declared it to be the real essence of matter, so also did he seek to detect the One amidst the Multiplicity of Ideas, and, having detected it, declared it to be the Good. What Ideas were to Phenomena, God was to Ideas: the widest generalization. God (the Good) was thus, the One Being comprising within himself all other Beings, the *ἐν καὶ πολλά*, the Cause

of all things, celestial and terrestrial: the supreme Idea. Whatever view we take of the Platonic cosmology—whether God created Ideas, or whether he only fashioned unformed matter after the model of Ideas—we are equally led to the conviction, that God represented the supreme Idea of all Existence; the great Intelligence, source of all other Intelligences; the Sun whose light illumined creation. God is perfect, ever the same, without envy, wishing nothing but good: for, although a clear knowledge of God is impossible to mortals, an approximation to that knowledge is possible: we cannot know what he is, we can only know what he is like. He must be good, because self-sufficing; and the world is good, because he made it. Why did he make it? God made the world because he was free from envy, and wished that all things should resemble him as much as possible; he therefore persuaded Necessity to become stable, harmonious, and fashioned according to Excellence. Yes, persuaded is Plato's word; for there were two eternal Principles, Intelligence and Necessity, and from the mixture of these the world was made; but Intelligence persuaded Necessity to be fashioned according to Excellence.* He arranged chaos into Beauty. But, as there is nothing beautiful but Intelligence, and as there is no Intelligence without a Soul, he placed a Soul into the body of the World, and made the World an animal.

Plato's proof of the world being an animal is too curious a specimen of his analogical reasoning to be passed over. There is warmth in the human being; there is warmth also in the world; the human being is composed of various elements, and is therefore called a body; the world is also composed of various elements, and is therefore a body; and, as our bodies have souls, the body of the world must have a soul; and that soul stands in the same relation to our souls, as the warmth of the world stands to our warmth.† Having

* Μεμνημένη γὰρ οὖν ἡ τοῦδε τοῦ κόσμου γένεσις ἐξ ἀνάγκης τε καὶ νοῦ συστάσεως ἐγενήθη, νοῦ δὲ ἀνάγκης ἀρχόντος τῷ πεῖθειν αὐτὴν τῶν γιγνομένων τὰ πλείστα ἐπὶ τὸ βέλτιστον ἄγειν.—*Timæus*, p. 56.

† *Philebus*, pp. 170-1.

thus argued the world to be an animal, it was but natural he should conceive that animal as resembling its creator, and human beings as resembling the universal animal, τὸ πᾶν ζῶον. As soon as the World, that image of the eternal Gods, as soon as that vast Animal began to move, live, and think, God looked upon his work, and was glad.*

But, although God in his goodness would have made nothing evil, he could not prevent the existence of it. Various disputes have been warmly carried on by scholars, respecting the nature of this Evil which Plato was forced to admit. Some have conceived it nothing less than the Manichæan doctrine. Thus much we may say: the notion of an antagonist principle is inseparable from every religious formula: as God can only be Good, and as Evil does certainly exist, it must exist independently of him; it must be eternal. Plato cut the matter very short by his logical principle,—that since there was a Good, there must necessarily be the contrary of Good, namely, Evil. If Evil exists, *how* does it exist, and *where*? It cannot find place in the celestial region of Ideas. It must therefore necessarily dwell in the terrestrial region of phenomena: its home is the world; it is banished from heaven. And is not this logical? What is the world of phenomena but an imperfect copy of the world of Ideas, and how can the imperfect be the purely Good? When ideas are 'realized,' as the Pantheists would say, when Ideas, pure immutable essences, are clothed in material forms, or when matter is fashioned after the model of those Ideas, what can result but imperfections? The Ideas are not in this world: they are only in a state of *becoming*, ὄντως ὄντα, not γιγνόμενα. Phenomena are in their very nature imperfect: they are perpetually striving to exist as realities. In their constitution there is *something* of the divine: an image of the Idea, and some participation in it; but more of the primeval chaos.

* Ὡς δὲ κινήθην αὐτὸ καὶ ζῶν ἐνεόησε τῶν αἰδίων θεῶν γεγονὸς ἄγαλμα ὁ γεννήσας πατήρ, ἡγάσθη τε καὶ εὐφρανθεὶς ἐτι δὴ μᾶλλον ὅμοιον πρὸς τὸ παράδειγμα ἐπενόησεν ἀπεργάσασθαι.—*Timæus*, p. 36.

Those, therefore, who say that Plato thought that 'Evil was inherent in matter,' though expressing themselves loosely, express themselves on the whole correctly. Matter was the great Necessity which Intelligence fashioned. Because it was Necessity and unintelligent, it was Evil, for Intelligence alone can be good.*

Now, as this world of phenomena is the region where Evil dwells, we must use our utmost endeavours to escape from it. And how escape? By suicide?—No. By leading the life of the Gods; and every Platonist knows that the life of the Gods consists in the eternal contemplation of Truth, of Ideas. Thus, as on every side, are we forced to encounter Dialectics as the sole salvation for man.

From the above explanation of the nature of Evil, it will be seen that there is no contradiction in Plato's saying, that the quantity of Evil in this life exceeded that of the Good; it exceeds it in the proportion that phenomena exceed noumena, —that matter exceeds Ideas.

But although Evil be a necessary part of the world, it is in constant struggle with Good. What is this but the struggle of *Becoming*? And man is endowed with Free Will and Intelligence: he may therefore choose between Good and Evil.† And according to his choice will his future life be regulated. Metempsychosis was a doctrine Plato borrowed from Pythagoras; and in that doctrine he could find arguments for the enforcement of a sage and virtuous life, which no other afforded at that epoch.

We have said nothing of the arguments whereby Plato proves the existence of God; for we have been forced to pass over many details: but we cannot close this chapter without alluding to an argument often used in modern times, and

* In the *Laws*, x. pp. 201–2, he curiously distinguished the *νοῦς* from the *ψυχή* in this manner. The *ψυχή* (vital principle) is the self-moving principle; but, inasmuch as it is sometimes moved to *bad* as well as to *good* (τῶν τε ἀγαθῶν αἰτίαν εἶναι ψυχὴν καὶ τῶν κακῶν), it was necessary to have some other principle which should determine its direction. He therefore makes *νοῦς* (intelligence) the principle which determines the soul (whether the soul of the world or of man, it is the same) to good; and *ἔννοια* (ignorance—want of *nous*) which determines it to evil.

† *Laws*, x. p. 217.

seldom suspected to have had so ancient an upholder—God is proved to exist by the very feeling of affinity to his nature which stirs within our souls.

Such opinions as those above set down were certainly expressed by Plato at different times: but we again warn the reader against supposing them to have been his constant views. They are taken from works written at wide intervals, and bearing considerable difference of opinion; and in those very works there are occasional glimpses of a startling doctrine, namely, that man is but the plaything of God, who alternately governs and forsakes the world. The first clause of this sentence seems derived from Heraclitus, who said, that 'making worlds was the sport of Demiurgos.' Plato's words are these: ἀνθρώπων δὲ θεοῦ τι παίγνιον εἶναι μεμύχαινον: and this is said to be man's greatest excellence.* The second clause is formally expressed by Plato thus: 'God,' he says, 'alternately governs and forsakes the world; when he governs it, things go on well: it is the age of gold; when he forsakes it, the world suddenly turns round in a contrary orbit—a fearful crisis takes place, all things are disordered, mundane existence is totally disarranged, and only after some time do things settle down to a sort of order though of a very imperfect kind.'† The wisest word he has uttered on Theology is one rarely quoted, and not likely to be acceptable to theologians, namely, that we know nothing about the Gods, 'the speculations about the Gods are simply speculations about the opinions men form about the Gods.'—*Cratylus*, p. 401.

So much has been written and talked in modern times of τὸ καλόν, 'the Beautiful,' as conceived by Plato, and this by persons who never read a line of his works, that we must devote a few sentences to it.

The bond which unites the human to the divine is Love. And Love is the longing of the Soul for Beauty; the inextinguishable desire which like feels for like, which the

* *Laws*, vii. p. 32.

† *Politicus*, p. 280.

divinity within us feels for the divinity revealed to us in Beauty. This is the celebrated Platonic Love, which, from having originally meant a communion of two souls, and that in a rigidly dialectical sense, has been degraded to the expression of maudlin sentiment between the sexes. Platonic love meant ideal sympathy; it now means the love of a sentimental young gentleman for a woman he cannot or will not marry.

But what is Beauty? Not the mere flattery of the senses. It does not consist in harmonious outlines and resplendent colours: these are but the indications of it. Beauty is Truth. It is the radiant image of that which was most splendid in the world of Ideas. Listen to Plato's description of it in the *Phædrus*:—'For, as we have already said, every human soul has actually seen the Real Existences, or it would not have come into a human shape. But it is not easy for all of them to call to mind what they then saw; those, especially, which saw that region for a short time only, and those which, having fallen to the earth, were so unfortunate as to be turned to injustice, and consequent oblivion of the sacred things which were seen by them in their prior state. Few, therefore, remain who are adequate to the recollection of those things. These few, when they see here any image or resemblance of the things which are there, receive a shock like a thunderbolt, and are in a manner taken *out of themselves*; but, from deficiency of comprehension, they know not what it is which so affects them. Now, the likenesses which exist there of Justice and Temperance, and the other things which the soul honours, do not possess any splendour; and a few persons only, with great difficulty, by the aid of dull, blunt, material organs, perceive the terrestrial likenesses of those qualities, and recognize them. But Beauty was not only most splendid when it was seen by us forming part of the heavenly possession or choir, but here also the likeness of it comes to us through the most acute and clear of our senses, that of sight, and with a splendour which no other of the terrestrial images of supercelestial Existences possess. They,

then, who are not fresh from heaven, or who have been corrupted, are not vehemently impelled towards that Beauty which is aloft when they see that upon earth which is called by its name; they do not, therefore, venerate and worship it, but give themselves up to physical pleasure after the manner of a quadruped. But they who are fresh from those divine objects of contemplation, and who have formerly contemplated them much, when they see a godlike countenance or form, in which celestial beauty is imaged and well imitated, are first struck with a holy awe, and then, approaching, venerate this beautiful object as a god, and, if they were not afraid of the reputation of too raving a madness, would erect altars, and perform sacrifices to it.

'And the warmth and genial influence derived from the atmosphere which beauty generates around itself, entering through the eyes, softens and liquefies the inveterate induration, which coats and covers up the parts in the vicinity of the wings, and prevents them from growing. This being melted, the wings begin to germinate and increase, and this, like the growing of the teeth, produces an itching and irritation which disturbs the whole frame of the soul. When, therefore, by the contemplation of the beautiful object, the induration is softened and the wings begin to shoot, the soul is relieved from its pain and rejoices; but when that object is absent, the liquefied substance hardens again, and closes up the young shoots of the wings, which consequently boil up and throb, and throw the soul into a state of turbulence and rage, and will neither allow it to sleep nor remain at rest, until it can again see the beautiful object and be relieved. For this reason it never willingly leaves that object, but for its sake deserts parents, and brothers, and friends, and neglects its patrimony, and despises all established usages on which it valued itself before. And this affection is Love.'

The reader is doubtless by this time familiar enough with the Platonic philosophy to appreciate this passage. He will see the dialectical meaning of this poetical myth. He will

comprehend, also, that the Platonic Love is naturally more appropriate between two men, master and pupil, than between the two sexes; because it is then purer, and less disturbed by other feelings.

Beauty is the most vivid image of Truth: it is divinity in its most perceptible form. But what is the Good? The Good, τὸ ἀγαθόν, is God, but God considered in the abstract. Truth, Beauty, Justice, are all aspects of the Deity; Goodness is his nature. The Good is therefore incapable of being perceived; it can only be known in reflection. In the same manner as the sun is the cause of sight, and also the cause of the objects of sight growing and being produced, so also the Good is the cause of science, and the cause of being to whatever is the object of science: and, as the sun itself is not sight, nor the object of sight, but presides over both; so also the Good is not science, nor the object of science, but is superior to both, for they are not the Good, but goodly.

Plato was a Socratist. But his speculations on Ideas, Reminiscence, Metempsychosis, God, etc. were not learned from Socrates, who occupied himself almost exclusively with Ethical topics; and it is in Ethics, therefore, that we may expect to find Plato most resembling him.

Plato's ethical opinions are deductions from certain abstract logical premises, not from investigations into human nature. Thus, when 'engaged with the discussion of particular sciences, he resolves them into the science of Good; when engaged with the particular virtues, he resolves them into the virtue of Science.* Everywhere the Good and the True are convertible terms, and Virtue is the same as Science. There is, moreover, considerable contradiction in his various works on this, as on other points. In one dialogue (*Timæus*) he advocates Free Will; in another (*Hippias Minor*), Fatalism. Sometimes vice is involuntary, at other times voluntary: sometimes, indeed generally, vice is nothing but ignorance; elsewhere, as we have shown, vice is said to be partly ignorance and partly incontinence. Virtue is said to be Science; yet

* ARCHER BUTLER, *Lectures*, ii. 61.

Knowledge alone does not constitute Happiness, nor can Virtue be taught.

Although many passages may be quoted which contain pure and profound moral views, we cannot but regard as chimerical any attempt to deduce from his works an ethical system. All that can safely be relied on is general views, such, for instance, as his subordination of Ethics to Dialectics. M. De Gerando well observes, 'he did not found his ethics on a principle of obligation, on the definition of duty, but on the tendency to perfection.'

In Plato's Ethics the passions are entirely set aside; they are regarded as disturbances in the moral economy. Virtue is purely a matter of intelligence; and the intellect has therefore not only a regulative office, but the supreme direction of all action.* Now, as Chamfort admirably said, 'the Philosopher who would set aside the passions resembles a Chemist who would extinguish his fire.' We are all aware that it is very common 'to know the right, and yet the wrong pursue;' that the passions not only disturb the regulative action of Reason, but positively triumph over it; and that morals are our *mores*, our *habits*, as much as our beliefs.

The Ethics of Plato might suit the inhabitants of another world; they are useless to the inhabitants of this. His Politics are his Ethics applied to the State, and labour under the same errors.

The *Republic* is unquestionably one of the most interesting of his works; and so slow has been the progress of social science, compared with every other science, that many of the views Plato has there put forth are still entertained by very serious thinkers; whereas his views on psychology seldom, his views on physics never find a defender.

The weakness of man is the cause why States are formed. As he cannot suffice to himself, he must live in society. This

* We cannot interrupt our exposition with any examples; they are too numerous. But we may remind the student of that passage in the *Gorgias* respecting the misery of the unjust man, in which Plato endeavours to prove that he who does an injury suffers more than he who endures it.

society should be an image of man himself. The faculties which belong to him must find a proper field of activity in society; and this vast union of intellects should form but one intelligence. Thus man's virtues are, 1, *φρόνησις*, wisdom; 2, *ἀνδρεία*, fortitude; 3, *σωφροσύνη*, temperance; 4, *δικαιοσύνη*, justice. The State, therefore, must have its Rulers, the philosophers, who will represent wisdom; its Soldiers, who will represent fortitude; its Craftsmen and burghers, who will represent temperance. Justice is a quality which must be shared by all classes, as lying at the root of all virtuous action.

In wisdom and justice we have the alpha and omega of Plato's doctrine: justice is wisdom in act. The office of the Rulers is therefore to ordain such laws as will eventually prevent all injustice in the State. Their first care will be to instil into the minds of the citizens just notions respecting the Deity. All those who attribute to the Deity the passions and imperfections of men must be banished: hence the famous banishment of the poets, of which so much has been said. This law, pushed to its rigorous conclusions, is the law of fanaticism. Whatever the Rulers believed respecting Religion, was to be the Religion of the State. Strange that a pupil of Socrates should have advocated a law, the operation of which caused his master's condemnation! But there are other causes for the banishment of the poets besides their fictions respecting the Gods. They enervate the soul by pictures of immoderate desires; they give imitations of the vices and follies of men; they overstep the limits of that moderation which alone can balance the soul. Even the musicians are to be banished; those at least who are plaintive and harmonious. Only the Phrygian and the Dorian music can be admitted; the one impetuous and warlike, the other calm.

There is a germ of Stoicism in Plato, and that germ is here seen developed. A measured equability of mind was his ideal of human happiness, and anything which interfered with it was denounced. Poetry and music interfered with this

equability, and so did conjugal love. As the State could not subsist without children, children must be begotten. But parents are foolishly fond; they are avaricious for their children; ambitious for them. Husbands are also foolishly fond. To prevent these disturbances of good order, Plato ordains community of wives, and interdicts parentage. Women are to be chosen for marriage as brood-mares are chosen. The violent women to be assorted to the mild men; the mild to be assorted to violent men. But the children belong to the State. They are, therefore, to be consigned to the State Nurses, who will superintend their early education. Because children manifest different capacities, Plato thought with St. Simon, that each citizen should be ranked according to his capacity, the State undertaking to decide to which class the young man should belong. But, if domestic life is thus at a blow sacrificed to the public good, do not imagine that women will lose their occupations. No: women must share with men the toils of war and agriculture. The female dog guards sheep as well as the male; why should not the woman guard the State? * And, as some few women manifest a capacity for philosophy, those few will share with men the government. With community of wives and children, it is natural that community of property should be joined. Property is the great disturber of social life; it engenders crimes and luxuries which are scarcely better than crimes. Property, therefore, must be abolished. The State alone has riches.

In one word, the Family, no less than the individual, is sacrificed to the State; the State itself being an Abstraction. Like the Utopists of modern days, Plato has developed an *à priori* theory of what the State should be, and by this theory all human feelings are to be neglected; instead of developing a theory *à posteriori*, i. e. from an investigation into the nature of human wants and feelings. †

* This is Plato's own illustration.

† In the *Laws*, many of the political and social notions are modified; but the general theory is the same.

This is all logically deduced by him. He makes a Republic which has philosophers for its rulers, consequently abstractions for its laws; philosophy in his conception dealing only with abstractions. Believing in no higher reality than Universals, of which individual things were but vanishing appearances, believing in the perturbing and disturbing influence of Sense and Passion, the philosopher necessarily strove to suppress all individuality and to stifle all passion. Aristotle saw where the initial weakness lay—in the disregard of the individual and his needs.

I here close this necessarily imperfect account of one of the most influential thinkers that has ever lived; and in closing it I can only indicate in a few words the general sources of that influence over and above the genius of the writer which has charmed even those who have disregarded his opinions. His works are full of speculative yeast: he touches on all subjects, and agitates whatever he touches. The sceptical play of his intellect moves freely amid the most arduous and subtle problems. He starts fresh views, and irritates the mind to research. His unresting activity communicates itself to the reader. His daring ingenuity, which never stops at an absurdity, and sometimes reaches a plausibility, if not a truth, captivated students; his lofty views and splendid reputation made them eager to find his plausibilities true. Over Christian philosophy he exercised a vast and acknowledged influence, and over metaphysical philosophy scarcely less. He gave a criterion to the Subjective Method, which remained unmodified until Descartes. If, with all his genius and with all his activity, he failed to establish any one important truth, and failed even to enrich the world with many minor truths, if, in short, the only direct result of all his efforts is that of making men occasionally conscious that they have no tenable grounds for their opinions, the reason of this is, I believe, that on the Subjective Method no permanent truth can be established.

SEVENTH EPOCH.

Philosophy for the first time assumes the systematic form of a body of doctrine, all its conclusions respecting existences being referred to principles of Logic—The criterion stated by Plato is systematized and applied by Aristotle—A method of proof takes its place among the chief instruments of thought.

CHAPTER I.

LIFE OF ARISTOTLE.

STAGIRA—which, Boeckh says, should be written Stagiroi—was a town in Northern Greece, on the western coast of the Strymonic Gulf (now called the Gulf of Contezza) just where the coast begins to take a southerly bend. Its situation has been compared with the southern part of the Bay of Naples. Immediately south, a promontory, like the Punta della Campanella, and nearly in the same latitude, runs out in an easterly direction, thus effectually screening the little town and its harbour, Capros, from the stormy squalls of the Ægean. Stagira is said to resemble Sorrento, not only in the general disposition of its coast lines, but also in the terraced windings of its multitudinous orange and lemon groves.*

In this picturesque seaport, Aristotle was born, B.C. 384, that is, exactly one century after the birth of Herodotus;

* BLAKESLEY, *Life of Aristotle*, p. 12.

one century before the foundation of the Alexandrian library, and the execution of the Septuagint version of the Scriptures; and two centuries before the death of Philopœmen, 'the last of the Greeks,' when the Achæan league dissolved before the Roman power, and Greece merged her splendid existence in the dependence of a Roman province.

His father, Nicomachus, was a physician and an Asclepiad; but whether he had any better claim to the honour of descent from Æsculapius than so many others who usurped the title,* or simply belonged to the famous guild, cannot now be determined. It is certain that he was a physician of repute, attached to Amyntas II., the father of the Macedonian Philip.

It is unknown how long he remained at Stagira before accompanying his father to the court of Amyntas, at Pella, where he learned to know and ingratiate himself with Philip, who was hereafter to befriend him. Everything at this epoch is conjecture, and conjecture may amuse, but cannot instruct.

At the age of seventeen he lost his father. This is the next isolated fact which has been recorded, and it is important. He thus became his own master, with the command of a large fortune; a perilous condition to most youths; the temptation to squander his fortune in frivolous dissipation must have been great, and could only be withstood by an unusual seriousness of mind, or unusual felicity in his social connections. So plausible is the supposition that a youth thus circumstanced will be ruined, that idle gossip, which always flits about a celebrated name, invented a story of his having wasted his means, and having been reduced to sell drugs for a subsistence; a story which, however, found refutation even among the ancients, and is wholly irreconcilable with the known facts of his subsequent career.

He was young, ardent, ambitious, rich. Athens, the glory

* See HARLESS: *De Medicis Veteribus 'Asclepiades' dictis*, a work only known to me at second hand.

of the world, though her political sun was setting, the luminous centre of Philosophy and Art, beckoned to him, as Rome and Florence beckon to the students of our day. Plato taught there, and might admit him to the groves of the Academy. To listen to this 'old man eloquent,' was a rare attraction, and naturally it drew him to Athens. Arrived there, he found that Plato was absent. Awaiting the great teacher's return, he qualified himself for discipleship by three years of arduous study. Had he squandered his wealth in dissipation, as the babblers reported, he could not have collected the treasure of books which he is known to have bought; for in those days it was almost as costly to create a library of books as in our own to create a gallery of pictures.* To collect books and to read them are not always the same thing. With him they were one; and Plato, alluding to the extraordinary passion he displayed, called him 'the reader.' His writings show how diligently he had studied all accessible literature; and it is to his punctilious quotation of his predecessors that we are greatly indebted for the preservation of many fragments of ancient thought. So little justice is there in Bacon's sarcasm, that like an Eastern despot he strangled his rivals in order to reign peaceably.†

* According to GELLIUS, he paid for the works of SPEUSIPPUS alone three Attic talents, that is about 700*l.* of our money, a sum not to be spared out of the profits of drug-selling unless by a merchant prince. In our own days 1,000*l.* has been paid for a rare edition of an Italian poet; but *that* was merely the avidity of a collector's furor backed by the wealth of an English nobleman. Curious details on the price of books in the Middle Ages may be read in MURATORI: *Dissertazione sopra l'antichità Italiane*, Diss. XLIII. Compare also HEEREN: *Geschichte der Classischen Litteratur im Mittelalter*, Werke, 1822, IV. In our days of cheap literature—cheap, because we have cheap paper, and that because we wear linen instead of woollen clothes—these details seem to render the darkness of the dark ages more intelligible.

† Aristotle's precepts, no less than his practice, answers this accusation. See *Metaph.* II. 1, 995; *De Celo*, I. 10, 279; and *De Anima*, I. 1. BACON simply echoed PATRIZIO, whose enmity was virulent and avowed, and who declares that one cause of this hatred was the abuse which Aristotle heaps on the writers from whom his best ideas are stolen. PATRIZIO: *Discussionum Peripateticarum tomus quatuor*, Bâle, 1581, from which learned but untrustworthy work some moderns have largely drawn. The first volume contains a life and a list of the extant

When Aristotle came to Athens the splendour of her life was fast departing, and near at hand was the towering greatness of Macedon, so soon to overshadow her on the plains of Chæroneia. The sun was setting on the Age of Pericles, and was rising on the Age of Alexander. For sixty years Pericles had ceased to thunder from the bema; had ceased to communicate his agitating stimulus to art and politics; had ceased to adorn the beautiful city with his munificence and taste. Sophocles and Euripides were gone; and the grand and pathetic drama they had unfolded to applauding thousands, had fallen into the hands of Chæremón, Cleophon, and Theodectes (the last the friend of Aristotle), whose efforts to make rhetoric supply the place of poetry pointed unmistakably towards decline. Aristophanes no longer laughed at the absurdities, and scourged the corruptions of his time, in riotous and reckless farces, which too often wilfully misrepresented persons and ideas essentially wise and noble. No great prose writer except Xenophon remained; not one poet of eminence.

But if a sunset, it was still a glorious sunset, with some

works, with an account of all the Peripatetics. In the third book there is a valuable collection of the passages in which *A.* refers to his own writings; a collection subsequently used and expanded by RITTER, but without the acknowledgment due in such a case. The second volume gives an exposition of the points of agreement between the doctrines of *A.* and Plato, and the older writers. In the third volume the points of difference are noted. In the preface he complains of the insults to philosophers (p. 291-2), and sarcastically adds that there is no mention of HIPPOCRATES. (Some moderns, coupling this supposed silence with the silence of THUCYDIDES, have argued that Hippocrates lived after Aristotle; but the fact is that Hippocrates is mentioned, and in the *Politics* there is a sketch of his views on climate.) In the fourth volume PATRIZIO gives full expression to his antagonism. GIORDANO BRUNO, in spite of his own opposition to the peripatetic system, speaks with measureless contempt of PATRIZIO, as 'un sterco di pedante Italiano che ha imbrattati tanti quinterni con le sue discussioni peripatetiche,' and vows that he has not understood the Stagirite, but only read and reread him, 'cucito, seucito e conferito con mill' altri greci autori amici e nemici di quello, et al fine fatta una grandissima fatica non sola senza profitto alcuno, ma etiam con un grandissimo sproposito.' *De la Causa Principio et Uno (Opere Ital., Leipzig, 1830), I. 250.* PATRIZIO had many admirers and imitators; a notable one is BASSO, *Philos. Naturalis adversus Aristotelem*, libri xii. Elzevir, 1649. I have not had the courage to extend my wanderings further through this rubbish of denunciation and criticism heaped up by the iconoclasts.

splendour of the after-glow. Great memories swelled ambitious minds. Powerful vibrations were still felt from Salamis, Marathon, and Plataea. Isocrates upheld the renown of Athenian eloquence; and the greater Demosthenes was preparing for his matchless displays. Praxiteles was at work upon statues, the very copies of which were for centuries to be the despair of artists. Scopas, the sculptor of the immortal Niobe and the Venus of Milo, had enchanted the Athenians with his Furies. Diogenes, with drastic energy, despised the citizens from his tub. The schools were crowded with listeners to many teachers. In every direction there was intellectual activity and social ferment. A young, keen intellect would find there abundant stimulus.

As years ripened his intelligence, and free intercourse with eminent men procured him the advantages and opportunity of display, Aristotle gradually won for himself a foremost position. He came there a raw ambitious youth, not only with the disadvantages of inexperience, but with those disadvantages of accent and manner which, in the eyes of supercilious Athenians—the Frenchmen of antiquity—made him seem almost a barbarian. These, however, he soon modified. One fact recorded of him—that he was somewhat given to foppery in costume—implies an eager sensitiveness to approbation, which would have directed his attention to anything provincial in his air. Keen, witty, logical, and learned, he was a brilliant talker, and in that city of talkers could hold his own with the best; not even refraining from controversy with his great master. Without pretending to decide the much vexed question of his ingratitude towards Plato, I must express my own disbelief in the accusation; although it is very credible, and by no means derogatory to him, that, differing from his master in cast of mind, as well as on certain fundamental points of philosophy, he should often, during the seventeen years they were together, have been seduced into warm, and sometimes irritating, discussion with one whom, on the whole, he considered as the noblest of

thinkers. All opposition is apt to be construed as an offence; and if Aristotle's criticisms and allusions to Plato are not always remarkable for their judicial calmness, they have never any approach to irreverence. Often in antagonism—how could this sincerely be avoided?—he is never in hostility to Plato. Indeed, in the *Ethics*, he complains of the necessity of attacking doctrines held by 'dear friends,' adding—'It is our duty to slay our own flesh and blood where the cause of Truth is at stake, especially as we are philosophers; loving both, it is our sacred duty to give the preference to Truth.' It is a timidity unworthy of a noble mind to shrink from intellectual opposition, as an offence against friendship, and to suppress convictions for fear of mis-construction.

Aristotle remained twenty years at Athens. During seventeen of these years, Plato was first his master, and then his friend. His health was, like that of most ardent brain-workers, delicate. He was short and slender in person; he had small eyes, and an affected lisp. Somewhat given to sarcasm in conversation, he made, of course, many enemies. On hearing that some one had vituperated him in his absence he humorously said, 'If he pleases, he may beat me too—in my absence.' His heart was kind, as was manifest in certain acts, and is expressed in this saying, 'He who has many friends has no friends,' which profoundly touches the very core of the subject, and may be paired off with this other saying of his, 'A friend is one soul in two bodies.' When asked how we should behave towards friends, he said, 'As we should wish them to behave towards us.'

Advancing age and development, no less than the decidedly scientific bias impressed upon his studies, necessarily caused him to take up an independent position with respect to Plato, who had little taste for physical science, and whose intellect naturally withdrew from those very subjects to which his young rival was, by nature and early bias, strongly determined. Without absolutely opening a rival school, Aristotle gradually gathered round him a circle of admirers,

and began, during the last years of his Athenian residence, to give lectures.*

Among the listeners was Hermias, the tyrant (or ruler) of Atarneus, and to him, by invitation, Aristotle went, on quitting Athens, after Plato's death. His companion on this journey was Xenocrates, the best loved of Plato's disciples. What was the object of their visit? It has been conjectured that Hermias invited them to frame a political constitution. The scheme, if such it were, was frustrated by the assassination of Hermias, and the fall of Atarneus into Persian hands. The two philosophers escaped to Mytilene, carrying with them Pythias, the adopted daughter of their friend and patron; and Aristotle subsequently married her, out of compassion for her defenceless position, and respect for the memory of his murdered friend. Worthy of special reprobation, as indicating the peculiar infelicity with which calumny often selects its points of attack, is the fact that his friendship for Hermias, and generosity toward Pythias, furnished the cruel thoughtlessness of scandal with its bitterest accusations. Here once more may be seen how in this life men are punished for their virtues; as a set-off, perhaps, to the rewards which often crown their vices. So little reliance can be placed on these ancient scandals, that some call Pythias the daughter, and others the concubine, of Hermias. It is, perhaps, a slight objection to both these assertions that Hermias was an eunuch.

To the memory of Hermias he raised a statue at Delphi, with an inscription; on which act was founded a charge of impiety. Nor was the memory of Pythias, who died after giving birth to a daughter, less honoured by the grateful husband. In his will he enjoined that her bones should be laid beside his own.

He had not long been at Mytilene before he received

* The story of his having practised medicine at this time, which is founded on his interest in that art, is refuted by his express statement in the work *De Divinatione*, I. 463, that in medicine he was only one of the laity, though accustomed to philosophize upon it.

from Philip of Macedon the magnificent offer to undertake the charge of the young Alexander. From this it is evident that his reputation, while at Athens, must have been considerable. To Macedon he went. His princely pupil was then fourteen: young enough to receive a determining bias, old enough to revere the intellectual force which impressed that bias. The respectful love which men of fine intellect and generous sympathies so gladly give to their first instructors is well expressed in the saying of Alexander, that he honoured Aristotle no less than his own father; for if to the one he owed life, to the other he owed that which made life valuable.

That the tutor and pupil might promenade in the cool shade during the hours of instruction, Philip caused a gymnasium to be built in a grove; and even so late as the days of Plutarch, the traveller might still see the shady walks (*περίπατοι*) with their stone seats for resting-places. Aristotle remained seven years in Macedon; but only four of these were given to the education of the prince, who at eighteen became Regent. Thus while Demosthenes was thundering against the ambition of Philip, who claimed for Macedon the hegemony of Greece, Aristotle was stimulating and enlarging the mind of Alexander, who was soon to carry the silver shields of Macedon from Syria to Egypt, from Candahar to the Indus, and from the Indus to the Persian Gulf. Popular fiction makes the great teacher accompany the great conqueror on this splendid expedition; and one regrets that this is a fiction. There was, indeed, other work for Aristotle to do, which the life of camps would hardly have advanced. Still the expedition would have been a vast experience for him; and his observing mind could not have beheld that varied, shifting panorama without great result. To have passed with the conquering hosts to Tyre; to have witnessed the foundation of Alexandria; to have lived through the agitations of the day at Arbela, when the countless hosts of Darius were assembled on the plain beneath the Koordish mountains, and there were slaughtered like sheep; to have

witnessed the successive subjection of Babylon and Susa, of Persepolis and Ecbatana; and finally to see the young Dionysus, maddened with the insolence of success, cut off suddenly in his youth; these were grand experiences which one regrets to think were lost to Aristotle.

Although, as I said, the relation between master and pupil lasted only four years, the relation of friendly counsel on the one side, and magnificent gratitude on the other, continued. Had it not been for Alexander's princely aid, Aristotle's enormous collections could not have been made. The aid is unexampled. It is said, but not on trustworthy authority, that Alexander presented him with the sum of eight hundred talents, which represents nearly two hundred thousand pounds of our money. Few critical readers will believe that; and Schneider, in his edition of the *Historia Animalium*, quotes with approbation the estimate of a predecessor, who calculates that the whole revenue of Macedon would not have furnished such a sum. Still if we make liberal deductions, and strike off two-thirds of this sum, it leaves a splendid surplus. The enormity of the exaggeration points to an enormous sum. Add to this the statement of Pliny, that Alexander gave orders to his hunters, game-keepers, fishermen, and bird-catchers to furnish the philosopher with all the material he might desire—an order which at once placed several thousand men at his service.* But at the same time remember it is Pliny who makes the statement, and for untrustworthiness of statement he cannot easily be surpassed; so that even here an immense exaggeration may be suspected; and to sum up, remember that although Aristotle must have had a large collection of materials before he could have written his work on animals, Humboldt declares

* Alexandro Magno rege inflammato cupidine animalium naturas noscendi, delegataque hac commentatione Aristoteli, summo in omni doctrina viro, aliquot millia hominum in totius Asiæ Græciæque tractu parere jussa, omnium quos venatus, aucupia, piscatusque alebant; quibusque vivaria, armenta, alvearia, piscine, aviaria in cura erant; ne quid usquam genitum ignoraretur ab eo.—PLINY: *Hist. Nat.*, VIII. 16.

that there is no trace in that work of any acquaintance with animals first known through Alexander's expedition.

After an absence of twelve years, B.C. 335, Aristotle reappeared in Athens. He found the Academy already occupied by his friend Xenocrates; so that some other place had to be sought where he might open a school. This he found at the Lyceum, a gymnasium in the vicinity of the temple of Apollo Lykeios, founded by Pisistratus, and embellished by Pericles. It was the most splendid of the Athenian gymnasia, consisting of a mass of edifices surrounded with gardens, avenues, and a sacred grove. It had its spacious courts with porticos, theatres for professors, covered promenades, baths, an arena for wrestling matches, and a stadium for foot-races. The walls were adorned with paintings; the gardens and walks were furnished with seats. But we must not suppose, as many suppose, that this establishment was placed under the direction of Aristotle, or that he had any voice in its affairs. He simply received permission to teach in the morning and evening at the *peripatos*, a permission which was the more acceptable because the shady walks offered facilities to his accustomed habit of walking to and fro during the delivery of lectures. The name of Peripatetics is commonly supposed to have been given to his disciples on account of this habit; but as, according to the testimony of Theophrastus and Lycon, the lecture-place itself was named *ὁ περίπατος*, the locality probably gave the title to his school. This suggestion is countenanced by the practice in other cases; for we find the schools designated by the places where they were founded, unless when some peculiarity in doctrine gave the title: thus the Academy, the Porch, the Garden, Megara, and Cyrene, severally gave names to schools; but never was a name borrowed from some casual peculiarity in the mode of lecturing. Moreover, Aristotle was by no means singular in this practice of promenading while he taught.

* MATTER: *Hist. de l'Ecole d'Alexandrie*, Paris, 1840, I. 30.

For thirteen years he continued teaching, and composing his immortal treatises; powerfully impressing the crowd of eager disciples, but probably regarded with angry suspicion by the patriots, owing to his connection with Alexander. And now came the electric shock, shaking Athens to her foundations, and agitating her with tumultuary hopes: the Great Conqueror was no more! At once, and with exultant energy, the anti-Macedonian party took the lead in public affairs. Aristotle necessarily was in peril; for although, in truth, his life had been blameless of political intrigue, and no colourable accusation could be raised against him on that score, if only because he was excluded from political influence;* yet as a foreigner, a philosopher, and a friend of Macedon, he was trebly odious to the political leaders; and a pretext for accusation was raised on a ground where such pretexts are always easily raised and are always dangerous—irreligion. He was accused of blasphemy, and of paying divine honours to mortals. And who were these mortals he had honoured? His friend and his wife. The charge may seem frivolous; but too well he knew the temper of the multitude to hope that the absurdity of the charge would be a guarantee for his safety. Mobs seldom reason, rarely examine. The blameless life and lofty soul of Socrates had been no defence against the charges of Meletus; and Aristotle quitted Athens, 'not to give the Athenians a second opportunity of committing a sacrilege against philosophy.'

He retired to Chalcis in Eubœa. There he wrote an elaborate defence of his conduct, and exposed the calumnies circulated about him. But his health, always delicate, and severely tasked by unremitting study, rapidly gave way. The Athenians, on his refusal to appear in answer to the summons of the Areopagus, deprived him of citizenship, and all the honours that had been conferred upon him. An idle sentence of death was passed; but nature had

* This political attitude is conspicuously set forth in Mr. CONGREVE's introduction to his edition of the *Politics*, London, 1855.

already written that sentence in terms that were not idle. He died in the sixty-third year of his age, B.C. 322, only a few months before the great orator, Demosthenes, also an exile.

His will, which may be read in Diogenes Laertius, tells of his thoughtful kindness. His daughter Pythias, his son Nicomachus, his adopted son Nicanor, and his concubine Herpyllis, are all duly provided for, and some of his slaves are emancipated, others rewarded.

The purposes of this History render it unnecessary to enter upon the vexed question of the authenticity of the various writings which have passed under his name, had I the scholarship which could justify such a digression. The curious reader will easily find abundant material on this and all cognate points. We have here rather to consider the nature of his achievements. The first thing which must strike every one is their encyclopædic extent, unrivalled in the history of literature. In all branches of science then cultivated he was proficient. He wrote on Politics, giving the outlines of two hundred and fifty-five constitutions; even the little treatise on that subject, which is still extant, is thought to be one of the very best works yet written; and Dr. Arnold, who knew it by heart, declared that he found it of daily service in its application to our own time. His Ethics, Rhetoric, and Logic are still by many held to be authoritative and unsurpassed. His Metaphysics would of itself suffice to found a great renown. His fragment on Poetics is perhaps the most valuable of all ancient critical writings. And as if these were not titles enough, we must now add the several scientific works which form the special object of this volume; these embrace Physics, Astronomy, Zoology, Comparative Anatomy, and Psychology. With Sir W. Hamilton, we may say: 'His seal is upon all the sciences, and his speculations have mediately or immediately determined those of all subsequent thinkers.' Hegel, though of a less fervid temperament, expresses himself with greater emphasis: 'He penetrated into the whole universe of things,

and subjected its scattered wealth to intelligence; and to him the greater number of the philosophical sciences owe their origin and distinction.*

Such an intellectual phenomenon must always excite astonishment. Let us form what opinion we may of his philosophy, we cannot withhold our admiration of the vigour and comprehensiveness of his mind. Nor is this his only claim. He is admirable for the intense urgency of his mind in seeking *scientific* explanations of phenomena, at a period when such explanations were novelties; and for the dominant inductive tendency which led him on all subjects to collect the facts before reasoning on them. The contrast he presents to Plato in this respect is as much to his advantage as the contrast in respect of literary power is to his disadvantage.†

* HEGEL: *Vorlesungen über die Gesch. der Philos.*, 1833, II. 298.

† The contrast is felicitously presented by MAURICE in the following passage: 'The student passing from the works of Plato to those of Aristotle is struck first of all with the entire absence of that dramatic form and that dramatic feeling with which he has become familiar. The living human beings with whom he has conversed have passed away. Prodicus, Protagoras, and Hippias are no longer lounging upon their couches amidst groups of admiring pupils; we have no walks along the walls of the city, no readings beside the Ilissus, no lively symposia giving occasion to high discourses about love, no Critias, recalling the stories he had heard in the days of his youth, before he became a tyrant, of ancient and glorious republics; above all, no Socrates forming a centre to those various groups. Some little sorrow for the loss of so many clear and beautiful pictures will be felt, perhaps, by every one, but by far the greater portion of readers will believe that they have ample compensation in the precision and philosophical dignity of the treatise for the richness and variety of the dialogue.'—*Moral and Metaphysical Philosophy*, 1850, I. 162.

CHAPTER II.

ARISTOTLE'S METHOD.

ALL philosophy is either an objective inquiry into the relations of Things, or a subjective inquiry into the relations of Ideas. We begin by forming conceptions of phenomena, and then we proceed to inquire how those conceptions were reached; in the second inquiry we have to lay bare the genesis of our knowledge, and, in so doing, to discriminate between its objective and subjective elements; between what is *given* by the external order, and what is *brought* by the mind. This separation has been attempted with more or less success in all ages of philosophy; but it was only in Kant that it was attempted with a clear consciousness of its speculative importance. We shall in the course of our survey have many opportunities of watching the attempt; and we must fix our attention on Aristotle as the first who arranged speculative questions in such a systematic form as stimulated and suggested the research. He not only resumed all the speculations of his predecessors, and placed them in a clearer light by his redistribution of their questions,—he not only condensed the vacillating vapours of philosophy into tangible systems, he constructed an Organon whereby all research might be carried on.

Plato had rightly discerned that science could only be of Universals (as we should say, general propositions): the great question which presented itself following this was: How do we arrive at these general propositions? What *are* these Universals? And the importance of this question is seen when we reflect that, widely as modern science differs from ancient science, both agree in founding their principles on

general propositions, the difference arising in the routes by which these propositions have been sought, and the guarantees they offer. In modern science universals are the highest generalities of accurate quantitative research. Often transcending the limits of actual experience, they are always founded on experience, and are strictly conformable with all we know, or think. As abstract expressions of the observed order they are liable at any moment to be displaced by expressions more accurately representing that order. They are recognized as purely subjective. In ancient science they were never suspected to have no objective reality. They were by most thinkers believed to exist quite independently of the knowing mind; and it was the primary aim of science to find them as existences; when found, they needed no confrontation with reality, they were self-disclosed and self-sustained.

It is here that the fundamental difference between ancient and modern philosophy begins, and it is only another form of the fundamental difference between the Subjective and Objective Methods. In Aristotle we are called upon to salute the dawn of the Objective Method, although many centuries had to elapse before that dawn could widen into day. From causes which I have elsewhere explained,* the continued employment of the Subjective Method was inevitable; nevertheless Aristotle may be truly styled the father of the Inductive Philosophy, since he first announced its leading principles; and announced them with a completeness and precision not surpassed by Bacon himself. There is, indeed, a radical defect in his conception of Method, but it is a defect not less visible in the *Novum Organum*, and is common to all the systematic expositions of Method that have yet been published. This defect is the absence of the due recognition of Verification. All writers implicitly recognize Verification as the inseparable attendant of Observation, Induction, and Deduction; but

* Aristotle: *A Chapter from the History of Science*, pp. 45-100.

they do not explicitly, and emphatically, assign to it the primary importance it should have; they do not trace in its neglect the cause of every failure. Overlooking this defect, men have expressed surprise at the unquestionable fact that Aristotle and Bacon failed egregiously in scientific research, in spite of their conception of scientific Method; and this failure has sometimes been made a ground for denying the value claimed for Method. But the seeming contradiction disappears on close examination. The failure is then traced to a radical imperfection in the Method. A discrepancy is disclosed between the principles which Aristotle and Bacon implicitly taught, and the principles they actually employed.

We will first inquire what those principles were. In direct opposition to Plato, who, denying the validity of the senses, made intuitions the ground of all true knowledge, Aristotle sought his basis in sensuous perception. Anticipating Bacon, he affirmed that it was wiser to dissect the complex phenomena of sense than to resolve them into abstractions—'melius est naturam secare quam abstrahere.'* His reliance was on Experience and Induction: the one furnishing the particular facts, from which the other found a pathway to general facts—or laws.† Without sensation thought is impossible.‡ Plato held that the deceptions of sense justified scepticism of all sense-knowledge (ἀπατῆς μεστὴ ἡ διὰ τῶν ὁμμάτων σκέψις). Aristotle, more correctly, taught that error did not arise from the senses being false media, but from the wrong interpretations we put on their testimony. Manifold deceptions may thence arise; but each sense speaks truly so far as it speaks at all.§ It is from sense we gain the knowledge of particulars. It is from Induction we gain the knowledge of universals. Agreeing with Plato that Science

* BACON: *Nov. Org.*, 41.

† ἐπαγωγή δὴ ἢ ἀπὸ τῶν καθέκαστα ἐπὶ τὰ καθόλου ἐφοδός. *Topic*, I. 10. See also *Anal. Post.*, I. 31; *Hist. Animal.*, I. 6.

‡ οὐδὲ νοεῖ ὁ νοῦς τὰ ἐκτὸς μὴ μετ' αἰσθήσεως ὄντα. *De Sensu*, VI. 445; *De Anima*, III. 8, 432.

§ *De Anima*, III. 3; *Metaph.*, IV. 5; and elsewhere.

is only concerned with universals, he affirmed that these could only be reached through experience.

This is the corner-stone of the experience-philosophy or 'Empiricism,' so often urged as a reproach against Aristotle.* Hegel boldly denies the charge. Science regards the accusation as an eulogy. Unhappily, even by Aristotle, experience was too frequently neglected and too carelessly interrogated. The vigilance of scientific scepticism was wanting. Yet at times he seems thoroughly impressed with the necessity of securing his basis before attempting to build. 'Let us first understand the facts, and then we may seek for their causes.'† There are many passages in which he distinctly disapproves of the fatal tendency to eke out deficiencies of observation by mere guesses, and to rely on those guesses as on observations. Of such passages four may here be given:—

I. Speaking of the parthenogenesis of bees, he says, 'There are not facts enough to warrant a conclusion, and more dependence must be placed on facts than on reasonings, which must agree with facts.'‡

II. Speaking of Hybridity, after noticing the opinions of his predecessors, and even suggesting an *à priori* argument himself, he says, 'But such a proof is far too abstract and empty (κενός). For reasons not drawn from the inherent principles of things (τῶν οἰκείων ἀρχῶν) are empty, and only seem to explain them, just as only those are geometrical proofs which are deduced from geometrical principles; so also in all other sciences. The empty argument seems potent, but is powerless.'§

III. Speaking of those who held a certain astronomical view, he says, they did so because their thoughts were not directed to the phenomena and the discovery of the causes, but they endeavoured to make the phenomena correspond with their opinions.|| And still more strongly in this

* Even so late as SCHLEIERMACHER, who urges it in his *History of Philosophy*.

† *De Part.*, I. 1, 639.

‡ *De Gener. Animal.*, III. 10, 760.

§ *Ibid.*, II. 8, 748.

|| *De Celo*, II. 13, 293. Compare also *ibid.*, p. 294.

passage: 'These philosophers, treating of phenomena, say things which by no means correspond with the phenomena, the cause of this being that they have not rightly conceived first principles, but reduce everything to certain prescribed notions (*πρὸς τινὰς δόξας ὀρισμέναις*), and they persist in these in spite of all contradiction, as if they were in possession of true principles, as if these ought not rather to be educed from the phenomena.' *

IV. 'The reason why men do not sufficiently attend to the facts is their want of experience. Hence those accustomed to physical inquiries are more competent to lay down the principles which have an extensive application; whereas others who have been accustomed to many assumptions without the confrontation of reality, easily lay down principles, because they take few things into consideration. It is easy to distinguish those who argue from facts and those who argue from notions.' †

Instead of distrusting knowledge derived through the senses, and placing unhesitating reliance on knowledge derived from intuitions, he declared that ideas are nothing but the products of reason. Reason separates, by abstraction, the particular objects from their general relations, i.e. those relations which these objects have in common. Anticipating modern Psychology, he taught, confusedly indeed, and not always consistently, that intelligence is a late development; that the understanding is built up from sensuous materials; each particular sensation gives rise to a sensuous taste, and the permanence of this state is Memory; from Memory arise, first, *distinctions*; and finally, after many repetitions, *experience*; from experience a pathway leads to Science, that pathway being Induction. Plato taught that all knowledge was reminiscence—a revival of pre-existent Ideas. From any one Idea we can arrive at all others, owing to the logical connection existing between them. In direct contradiction to this, Aristotle maintained that complete knowledge could only

* *De Caelo*, III. 8, 306.

† *De Gen. et Corr.*, I. 2, 316. Compare also *De Partibus*, IV. 5, 679.

arise out of complete experience; and he significantly points out the danger of the Platonic Method, which neglects facts, and rashly concludes a general proposition from a few particulars.*

In indicating the way we are to arrive at general truths, he expresses himself with a precision unsurpassed by moderns. 'We must not,' he says, 'accept a general principle from logic only, but must prove its application to each fact, for it is in facts that we must seek general principles, and these must always accord with the facts.' † Nor, while thus insisting on Observation, was he wholly without a perception of the value of that aid to inquiry, which is usually supposed to be a modern invention, I mean Experiment. He did not, indeed, see its importance as moderns have seen it; for, not rightly apprehending the necessity of Verification, he failed to apprehend the true purpose of Experiment, which is simply a means of verifying the accuracy of data, and conclusions hypothetical or theoretical. But he refers to it, and even to vivisection, often enough to mislead a modern worshipper into the belief that this great instrument of scientific research was distinctly recognized by him. Here are a few of the passages I have noticed. ‡

He refers to the experiment of tying or removing the right testis of the male, previous to congress, in disproof of the hypothesis that the sexes are derived from the right and left testes.§ He refers to the experiment of removing the eyes from young birds, to show that these organs are capable of being reproduced, a capability not observed in adult birds.|| Although he places the seat of motive power in the heart, yet he refers to the experiment of removing the heart from tortoises, after which they still continue for some time to

* *De Gen. et Corr.*, I. 2.

† *De Animal. Motione*, I. 698. Δεῖ δὲ τοῦτο μὴ μόνον τῷ λόγῳ καθόλου λαβεῖν, ἀλλὰ καὶ ἐπὶ τῶν καθέκαστα καὶ τῶν αἰσθητῶν, δι' ἧπερ καὶ τοὺς καθόλου ζητοῦμεν λόγους, καὶ ἐφ' ὧν ἐφαρμόττειν οἰόμεθα δεῖν αὐτούς.

‡ M. BARTHÉLÉMY ST.-HILAIRE has pointed out several others in the introduction to his work *La Météorologie d'Aristote*, Paris, 1863.

§ *De Gener. Animal.*, IV. 1.

|| *Ibid.*, IV. 6.

move;* and to prove that the nutritive soul is contained in the centre, he refers to the insects whose heads and limbs may be removed without destroying their vitality. The fact is incorrectly stated. The separated head will live almost as long as the body; and I have often found the hinder part of a triton live and move for hours after its separation from the body.†

Aristotle's opposition to the Ideal Theory was one of Method no less than of conclusion; and, in contrast with Plato, he seems like a positive thinker of the modern school. He does not deny to Ideas a *subjective* existence; but he is completely opposed to their *objective* existence, which he regards as an empty and poetical metaphor. He says, that on the supposition of Ideas being Existences and Models, there would be several Models for the same Thing; since the same thing may be classed under several heads. Thus, Socrates may be classed under the Ideas of Socrates, of Man, of Animal, and of Biped; or Philosopher, General, and Statesman. The 'stout Stagirite' not only perceived the logical error of the Ideal theory, but also saw how the error originated. He profoundly remarked, that Ideas are nothing but productions of the Reason, separating, by a logical abstraction, the particular objects from those relations, which are common to them all. He saw that Plato had mistaken a subjective distinction for an objective one; had mistaken a relation, which the understanding perceived between two objects, for the evidence of a separate existence. The partisans of the theory of Ideas, Aristotle likens to those who, having to enumerate the exact number of things, commence by increasing the number, as a way of simplifying the calculation. In this caustic illustration we may see the nature of his objection to the Platonic doctrine. What, indeed, was the Ideal theory, but a multiplication of the number of Exist-

* *De Resp.*, XVII. 479.

† STILLING narrates that a frog lived, hopped about, and defended itself, for an hour after removal of its heart, and the whole of its viscera. *Untersuchungen über die Functionen des Rückenmarks*, 1842, p. 38.

ences? Men had before imagined that things were great, and heavy, and black or brown. Plato separated the qualities of greatness, weight, and colour, and made these qualities new existences.

Having disproved the notion of Ideas being Existences,—in other words, of General Terms being anything more than the expressions of the Relations of individual things,—Aristotle was driven to maintain that the Individual Things alone *existed*. But, if only individuals exist, only by sensation can they be known; and, if we know them by sensation, how is the Universal, τὸ καθόλου, ever known—how do we get abstract ideas? This question was the more pertinent because science could only be a science of the Universal, or, as we moderns say, a science of general truths; now inasmuch as Aristotle agreed with Plato in maintaining that sense cannot furnish us with science,* which is always founded on general truths (Universals), it was needful for him to show how we could gain scientific knowledge.

Plato's solution of the problem has already been exhibited; it was the ingenious doctrine of the soul's *reminiscence* of a former apprehension of truth, awakened by those traces of Ideas which sensation discovered in Things. This solution did not satisfy Aristotle. He, too, was aware that reminiscence was indispensable; but by it he meant reminiscence of previous experience, not of an anterior state of existence in the world of Ideas. By sensation we perceive particular things; by *induction* we perceive the general in the particular. Sensation is the basis of all knowledge: but we have another faculty besides that of sensation; we have Memory. Having perceived many things, we remember our sensations, and by that remembrance we are enabled to discern wherein things resemble and wherein they differ; and this Memory then becomes an *art* whereby a general conception is formed: this art is Induction. The natural method of investigation, he says, is to collect all the facts or particulars, and afterwards deduce from these the general causes of all things and their

* *Analyt. Post.*, i. 31.

actions.* This is accomplished by Induction, the pathway from particulars to generals. Man alone has this art. The distinction between brutes and men is, that the former, although they have Memory, have no Experience; that is to say, have not the art which converts Memory into Experience—the art of Induction. Man is the reasoning animal.

That Aristotle meant Induction by the art of which he speaks as furnished by experience, may be proved by one luminous passage of the *Metaphysics*. 'Art commences when, from a great number of Experiences, one general conception is formed which will embrace all similar cases.'† And, lest there should be any misunderstanding of his definition, he proceeds to illustrate it. 'Thus: if you know that a certain remedy has cured Callias of a certain disease, and that the same remedy has produced the same effect on Socrates, and on several other persons, that is *Experience*; but to know that a certain remedy will cure all persons attacked with that disease is *Art*: for Experience is the knowledge of individual things (τῶν καθέκαστα); Art is that of Universals (τῶν καθόλου).'[‡]

Hear him again: 'Experience furnishes the principles of every science. Thus Astronomy is grounded on observation; for, if we were *properly to observe* the celestial phenomena, we might *demonstrate the laws* which regulate them. The same applies to other sciences. *If we omit nothing that observation can afford us respecting phenomena*, we could easily furnish the demonstration of all that admits of being demonstrated, and illustrate that which is not susceptible of demonstration.'† And, in another place, when abandoned in his investigation by phenomena, he will not hazard an assertion. 'We must wait,' he says, 'for further phenomena, since phenomena are more to be trusted than the conclusion of reason.'

Looked at in a general way, the Aristotelian Method seems

* *Analyt. Post.*, i. 31.; comp. also *Hist. Animal.*, i. 6.

† Γίνεται δὲ τέχνη ὅταν ἐκ πολλῶν τῆς ἐμπειρίας ἐννοημάτων καθόλου μία γένηται περὶ τῶν ὁμοίων ὑπόληψις, *Met.*, i. 1.

‡ *Analyt. Prior.*, i. 30.

to be the Method of positive Science; but on closer meditation we shall detect their germinal difference to be the omission in Aristotle of the principle of rigorous Verification of each inductive step. The value of the truth expressed by a Syllogism does not consist solely in its accurate distribution, but also in the accuracy of its major premiss; we may form unexceptionable Syllogisms which shall be absurdly erroneous, as when we say, All black birds are crows; This bird is black: *ergo*, This bird is a crow. In the physical and metaphysical speculations of the ancients, we are constantly meeting with syllogisms as perfect as this—and as absurd; because the ancients generally threw their ingenuity into logical deduction, and scarcely ever into preliminary verification. When Aristotle therefore lays down as a canon the necessity of ascertaining generals from an examination of particulars, his canon, admirable indeed, needs to be accompanied by a distinct recognition of the equal necessity of Verification. Contrasted with the Platonic Method, Aristotle's is seen to great advantage. Plato, believing that the stimulus awakened by a single idea would enable a man to arrive at the knowledge of all ideas, in consequence of the necessary connection supposed to exist between them, could very well dispense with Induction. But Aristotle maintained that the completeness of knowledge is only obtainable through completeness of experience; every single idea is awakened in us by a separate sensation, and only on a comparison of like and unlike in phenomena are differences perceived. He complains of Plato, very justly, for neglecting details in haste to judge of universals.

Aristotle had therefore a novel and profound conception of scientific Method; but because he did not—and indeed in that age *could not*—confine himself to Experience and the generalizations of Experience, he could not effectually carry out his own scheme. His conception was just; but the application of such a Method could have led him only a short way, because there was not sufficient Experience then accumulated, from which to generalize with any effect.

Hence his speculations are not always carried on upon the Method which he himself laid down. Impatient at the insufficiency of facts, he jumps to a conclusion. Eager, as all men are, to solve the problems which present themselves, he solved them *à priori*. He applied his Syllogism before he had verified the exactitude of his premisses.

The distinction between Aristotle and Plato is, that while both admitted that science could only be formed from Universals, τὰ καθόλου, Aristotle contended that such Universals had purely a subjective existence, *i.e.* that they were nothing more than the *inductions* derived from particular facts. He, therefore, made Experience the basis of all Science, and Reason the Architect. Plato made Reason the basis. The tendency of the one was to direct man to the observation and interrogation of Nature; that of the other was to direct man to the contemplation of Ideas.

Observe, I say it was the tendency of the Aristotelian Method to direct man to the observation and interrogation of Nature; and this tendency we see illustrated in all the writings of the peripatetic school. But the tendency was in a great degree counteracted by the trammels of the Subjective Method, to which men still clung, and by a want of due appreciation of the indispensable necessity of Verification, whereby alone the Subjective Method could be displaced. We discern in Aristotle's conceptions of what constituted proof the germs of his logical failure.

Science is the co-ordination of facts, the reduction of particular facts to general facts. As this can only take place through an induction of universals from particulars, proof must first lie in the correctness of the induction; and when these universals have been attained, and a deduction is made from them to some new particulars, proof lies in the correctness of this deduction. There is, however, an initial difficulty: all knowledge rests upon antecedent knowledge. We see this in induction and in demonstration; the one arriving at a conclusion from particulars *already known*; the other starting from a conclusion *already known*. Plato

evades this difficulty by referring all knowledge to reminiscence. This explanation Aristotle rejects. He affirms that demonstration rests upon Universals which are *in their nature* better known* (or, let us say, more certainly apprehended); whereas Induction rests on particulars, which are better known *to us*. The basis of Science is therefore an Inductive Syllogism.

It is necessary to appreciate clearly this distinction between knowledge of universals and knowledge of particulars. He affirms that, although sensation is the origin of all knowledge, the first ideas awakened in the soul consist of *general* ideas. Thus a man seeing a body at a distance has at first only the general idea of *substance*; on approaching nearer, and observing that it moves spontaneously, he has the less general idea of an *animal*. On approaching still nearer, he recognizes the kind of animal, by recognizing many of the particulars which distinguish it as *kind*; and he thus gains a particular idea, in lieu of his first general idea. In this way the mind advances from the universal to the particular. The infant at first calls every man papa, and every woman mamma; afterwards it learns to discriminate individuals.

The fallacy here is patent. It confounds an *indefinite* with a *generalized* conception. It is a fallacy which leavens ancient speculation.

Since proof rests on universals, perception, which is concerned only with particulars, can give no science. Nay, if we could perceive that a triangle has the sum of its angles equal to two right angles, we should still be forced to seek for a proof of it (ἐξηγοῦμεν ἂν ἀπόδειξιν), otherwise we should have no knowledge of it.

* This very important distinction in his philosophy was completely misunderstood by the schoolmen, who, as Mr. ELLIS pointed out, were misled by the ambiguity of the Greek dative, and for *notius naturæ*, which would have been the proper rendering of τῇ φύσει γνωριμώτερον, substituted *notius naturæ*, as if Aristotle contrasted Nature's knowledge with our own. BACON fell into this error: *Works* by ELLIS and SPEDDING, 1857, I., 137. The same mistake is made by ROGER BACON: *Opus Majus*, Venet. 1750, p. 46.

If the question be asked *why* we must seek this proof of what has already been perceived, Aristotle answers: 'Because only particulars can be perceived, and science is of universals.' In another work (for hitherto I have been drawing from the *Analytics*), he judiciously remarks that it is absurd to seek for a proof of that which is clearly known, and for which all the conditions of a correct perception are present.* But even the universal must be obtained through induction from perceptions. He says that if we were in the moon, and the earth, coming between us and the sun, deprived us of light, we should have no knowledge of the cause of darkness; we should see that the moon was dark, but not why it was dark. It is true that, from frequent observation, we might find out the cause by detecting the universal; since *out of numerous particulars the universal becomes evident* (ἐκ γὰρ τῶν καθέκαστα πλειόνων τὸ καθόλου δῆλον). But, he adds, the universal has the preference, because it makes evident the cause. We do not understand a phenomenon until we can demonstrate its cause by a syllogism, showing that it necessarily follows from some general principle. Hence syllogism is the true scientific instrument; and as the syllogism proceeds from the general to the particular, it must be better known in its nature than the particulars it has to prove.

* *Phys.*, VIII. 3. Compare *Metaph.*, IV. 4.

CHAPTER III.

ARISTOTLE'S LOGIC.

THAT Aristotle was the first who instituted a separate Science named Logic, is a popular error. He has indeed the merit of having fully and systematically developed the various logical doctrines in a way unknown to his predecessors, and but little improved by successors for many generations; but he neither named these doctrines Logic, nor did he conceive them as parts of a separate science. That which since his day has been called the *Organon* is but a collection of independent essays on logical questions; and so far from its having any such purpose as the one commonly attributed to it, namely, the exposition of the Laws of Thought as Thought, the separation of Formal from Objective Logic, the unbiassed student will quickly discover that it has no systematic purpose, and the historian of philosophy knows that such a separation into Formal and Objective had not then been thought of.

It is unnecessary here to state in detail the contents of the separate treatises, which have been the text-book of logicians for centuries, and which therefore have supplied a want and exercised a fascination such as few works can rival. I shall content myself with a brief indication of their main results.

Logic is the science of Affirmation; Affirmation is the active operation of the Mind on that which sensation has presented to it; in other words, Affirmation is Thought. Affirmations may be true or false: there can be no falsehood in Sensation. If you have a sensation of an object, it must

be a true sensation; but you may affirm something false of it. Every single thought is true; but, when you connect two thoughts together, that is, when you affirm something of another thing, you may affirm that which is false. Everything therefore that you think about may be reduced to a Proposition; in fact, thoughts are a series of Propositions. To understand the whole nature of Propositions—to understand the whole Art of Thinking—is the province of Logic.

By a very natural confusion, Aristotle, thus convinced of the importance of language, was led to maintain that truth or falsehood did not depend upon things, but upon words, or rather upon combinations of words—upon Propositions. Logic therefore to him, as to Plato, though in a different way, became the real Organon of Science. But, as John Mill remarks, 'the distinction between real and nominal definitions, between definitions of words and what are called definitions of things, though conformable to the ideas of most Aristotelian logicians, cannot, as it appears to us, be maintained. We apprehend that no definition is ever intended to explain and unfold the nature of the thing. It is some confirmation of our opinion that none of those writers who have thought that there were definitions of things have ever succeeded in discovering any criterion by which the definition of a thing can be distinguished from any other proposition relating to that thing. The definition they say unfolds the nature of the thing: but no definition can unfold its whole nature; and every proposition in which any quality whatever is predicated of the thing unfolds some part of its nature. The true state of the case we take to be this: All definitions are of names and of names only; but, in some definitions, it is clearly apparent that nothing is intended except to explain the meaning of the word; while, in others, besides explaining the meaning of the word, it is intended to be implied that there exists a thing corresponding to the word. Whether this be or be not implied in any given case, cannot be collected from the mere form of expression. 'A centaur is an animal with the upper parts of a man and the

lower parts of a horse,' and 'a triangle is a rectilineal figure with three sides,' are, in form, expressions precisely similar; although, in the former, it is not implied that any *thing* conformable to the term really exists, while in the latter it is; as may be seen by substituting, in both definitions, the word means for *is*. In the first expression, 'a centaur *means* an animal,' &c., the sense would remain unchanged: in the second, 'a triangle *means*,' &c., the meaning would be altered, since it would be obviously impossible to deduce any of the truths of geometry from a proposition expressive only of the manner in which we intend to employ a particular sign.

'There are, therefore, expressions commonly passing for definitions which include in themselves more than the mere explanation of the meaning of a term. But it is not correct to call an expression of this sort a peculiar kind of definition. Its difference from the other kind consists in this, that it is not a definition, but a definition and something more. The definition given above of a triangle, obviously comprises not one, but two propositions, perfectly distinguishable. The one is, "There may exist a figure bounded by three straight lines;" the other, "and this figure may be termed a triangle." The former of these propositions is not a definition at all; the latter is a mere nominal definition or explanation of the use and application of a term. The first is susceptible of truth or falsehood, and may therefore be made the foundation of a train of reasoning. The latter can be neither true nor false; the only character it is susceptible of is that of conformity or disconformity to the ordinary usage of language.

'There is a real distinction, then, between definitions of names and what are erroneously called definitions of things; but it is that the latter, along with the meaning of a name, covertly asserts a matter of fact. This covert assertion is not a definition, but a postulate. The definition is a mere identical proposition, which gives information only about the use of language, and from which no conclusions respecting matters of fact can possibly be drawn. The accompanying

postulate, on the other hand, affirms a fact which may lead to consequences of every degree of importance. It affirms the real existence of things possessing the combination of attributes set forth in the definition; and this, if true, may be foundation sufficient to build a whole fabric of scientific truth.*

This distinction was not seen by Aristotle, and his whole philosophy was vitiated by the oversight. He regarded Definition not only as the Instrument of Thought, but as the Instrument of Investigation.

Philosophy having to classify Knowledge first attempts to classify existences, or the widest general relations under which existences can be known. These are the Categories. The history of the doctrine of Categories has been exhaustively treated by Trendelenburg,† and to his work the student is referred. The arrangement of Aristotle is as follows:—

Ὀὐσία	Substance.
Πόσον	Quantity.
Ποῖον	Quality.
Πρὸς τί	Relation.
Ποιεῖν	Action.
Πάσχειν	Passion.
Ποῦ	The where.
Πότε	The when.
Κεῖσθαι	Position in space.
Ἐχεῖν	Possession.

These Categories, or, as the Latin writers say, Predicaments, were intended to be an enumeration of those classes or *genera*, under some of which everything was to be reduced. They were held to be the most universal expressions for the various relations of things; they could not further be analyzed, but remained the fundamental definitions of things. It is, however, as has been remarked,‡ a mere catalogue of the distinctions rudely marked out by the language of familiar life, with little or no attempt to penetrate, by philosophic analysis, to the *rationale* even of those common distinctions.

* MILL: *System of Logic*, i. 195-7.

† TRENDLENBURG: *Geschichte der Kategorienlehre*, 1846; comp. HAMILTON: *Lectures on Logic*, i.; BÜHLE: *Gesch. der neueren Philos.*, i. 282-7.

‡ MILL: *System of Logic*, i. 60.

Such an analysis, however superficially conducted, would have shown the enumeration to be both redundant and defective. Some objects are omitted, and others repeated several times under different heads. It is like a division of animals into men, quadrupeds, horses, asses, and ponies.

The remark is just, and would have been admitted as just by Aristotle himself, since he does not pretend the classification is complete, but confesses that the same object may, under different categories, be at once a quality and a relation. But Aristotle does not usually ascribe much importance to this enumeration of the most general notions; so that we may regard it as nothing more than an attempt to exhibit in a clear light the signification of words taken absolutely, in order to show how truth and falsehood consist in the right or wrong combination of these elements.*

However imperfect this attempt at classification may be, it was held to be a satisfactory attempt for many centuries; nor was any one bold enough to venture on another until Kant, who, as we shall see, had quite a different object. We have not here to criticize it, but to exhibit its historical position. The idea of examining the *forms* of thought could scarcely have originated earlier. Previous speculators had occupied themselves with inquiries into the origin and nature of knowledge: Aristotle saw that it was time to inquire into the necessary forms of thought. To do this, to analyze the various processes of the mind in all its details, is the object of the treatises united together in his *Logic*.

Some had declared sense-knowledge to be deceitful; others had declared that sense-knowledge was perfectly faithful, as far as it went, but that it was incapable of penetrating beneath phenomena. Scepticism was assuming a menacing attitude. Aristotle, in his way, endeavoured to meet it, and he met it thus: It is true that the knowledge derived from our senses is not always correct; true also that our senses are to be trusted, as far as they go. A sensation, as a sen-

* RITTER, iii. 60.

sation, is true; but any affirmation you may make about that sensation may be either true or false, according to the affirmation. If an oar dipped in the water appears to you to be broken, the sensation you have is accurate enough; you *have* that sensation. But if, on the strength of that sensation, you affirm that the oar is broken, your affirmation is false. Error lies not in false sensation, but in false affirmation.

Like Plato, he held it to be indispensable to understand words if we are to understand thoughts; a position which, as we saw in the teaching of Socrates, was both novel and at the time important, because it called attention to the extreme laxity of language under which men disguised the laxity of their reasoning. A word, he said, is in itself indifferent; it is neither true nor false: truth or falsehood must result from a combination of words into a proposition. No thought can be erroneous; error is only possible to propositions.

Hence the necessity of Logic, which is the science of affirmations; it is in the Enunciate Proposition, ἀποφαντικός λόγος, that we must seek truth or falsehood. This proposition is subdivided into Affirmative and Negative propositions, which are mutually opposed, and gave rise to Contradiction so soon as they are asserted in the same sense of one and the same thing: *e.g.* 'It is impossible for the same thing to be and not to be.'

The principle of Contradiction he declares to be the deepest of all; for on it all Demonstration is founded. Because, however, he confounded truth of Language with truth of Thought, and supposed that Thought was always the correlate of fact, he fell into the mistake of maintaining truth of Language, or Propositions, to be identical with truth of Being.

Having erected Propositions, or the affirmative and negative combinations of Language, into such an exalted position, it became necessary to attend more closely to names, and thus we get the Predicables, a fivefold division of general Names, not grounded, as usual, upon a difference in their

meaning, that is, in the attribute which they *connote*, but upon a difference in the kind of class which they *denote*. We may predicate of a thing five different varieties of class-name:—

Γένος	a Genus.
Εἶδος	a Species.
Διαφορά	a Difference.
Ἰδιον	a Property.
Συμβεβηκός	an Accident.

'It is to be remarked of these distinctions that they express not what the predicate is in its own meaning, but what relation it bears to the subject on which it happens on the particular occasion to be predicated. There are not some names which are exclusively general and others which are exclusively species or differentia; but the same name is referred to one or another Predicable, according to the subject of which it is predicated on the particular occasion. *Animal*, for instance, is a genus with respect to Man or John; a species with respect to substance or Being. The words genus, species, &c. are therefore relative terms; they are names applied to certain predicates, to express the relation between them and some given subject: a relation grounded, not upon what the predicate *connotes*, but upon the class which it *denotes*, and upon the place which in some given classification that class occupies relatively to the particular subject.*

Induction and Syllogism are the two great instruments of his Logic. All knowledge must rest upon some antecedent conviction; and both in Induction and Syllogism we see how this takes place. Induction sets out, from particulars already known, to arrive at a conclusion; Syllogism sets out, from some general principle, to arrive at particulars.† There is this remarkable distinction, however (already noticed), established by him between the two, namely, that the general principle of the syllogism is *better known in itself* and in its own nature, while the particulars from which Induction

* MILL: *System of Logic*, i. 162.

† *Analyt. Post.*, i. 1.

proceeds are better known to us.* How came he by this distinction? Thus: the particulars of Induction are derived from Sense, and are more liable on that account to error; whereas the general principle of the Syllogism is known in itself, is further removed from the fallacies of sense, and is *κατὰ τὸν λόγον γνωριμώτερον*. Do we not always doubt whether we have rightly understood anything until we have demonstrated that it follows by necessity from some general principle? And does not this lead to the conviction that the Syllogism is the proper form of all science? Moreover, as the Syllogism proceeds from the general, the general must be better known than the particular, since the particular is proved by it.

Sensations are less trustworthy than ideas. The particulars are sensibles, but in and for themselves they are nothing; they exist only in relation to us. Nevertheless we are forced to make them our point of departure. We begin with sensuous knowledge to reach ideal knowledge. In this manner we proceed from the world of experience to that higher world of cognition.

The various investigations into the nature of Propositions which Aristotle prosecuted, were necessary to form the basis of his theory of reasoning, *i.e.* the Syllogism. He defined the Syllogism to be an enunciation in which certain Propositions being laid down, a necessary conclusion is drawn, distinct from the Propositions and without employing any idea not contained in the Propositions. Thus:—

All bad men are miserable;
Every tyrant is a bad man:
ergo,
All tyrants are miserable.

His examination of the sixteen forms of the Syllogism exhibits great ingenuity, and, as a dialectical exercise, was doubtless sufficient; but it must not detain us here. The theory of the Syllogism is succeeded by the theory of De-

* Φύσει μὲν οὖν πρότερος καὶ γνωριμώτερος ὁ διὰ τοῦ μέσου συλλογισμὸς, ἡμῖν δ' ἐναργέστερος ὁ διὰ τῆς ἐπαγωγῆς.—*Analyt. Prior.*, ii. 24.

monstration. If all knowledge owes its existence to anterior knowledge, what is this anterior knowledge? It is the *major* proposition of a Syllogism. The conclusion is but the application of the general to the particular. Thus, if we know that Tyrants are miserable, we know it because we know that All bad men are miserable; and the middle term tells us that Tyrants are bad men. To know, is to be aware of the cause; to demonstrate, is to give the Syllogism which expresses the knowledge we have. It is therefore necessary that every scientific Syllogism should repose upon principles that are true, primitive, more evident in themselves than the conclusion, and *anterior* to the conclusion. These undemonstrable principles are Axioms, Hypotheses, &c., according as they are self-evident, or as they presuppose some affirmation or negation; they are Definitions when they limit themselves to an explanation of the essence of the thing defined, without affirming anything respecting its existence.

The proper subjects of demonstration are those universal attributes of particular things which make them what they are, and which may be predicated of them. It is one thing to know *that* a thing is so; another thing to know *why* it is so: hence the two orders of demonstrations, the *τοῦ ὅτι*, 'the demonstration of the cause from a consideration of the effect,' and the *τοῦ διότι*, 'the demonstration of the effect from the presence of the cause.'

We close this exposition of the leading points of Aristotle's Logic with his own somewhat touching words, as he concludes his work: 'We have had no works of predecessors to assist us in this attempt to construct a science of Reasoning; our own labours have done it all. If, therefore, the work appears to you not too inferior to the works on other sciences which have been formed with the assistance of successive labourers in the same department, you will show some indulgence for the imperfections of our work, and some gratitude for the discoveries it contains.'

CHAPTER IV.

THE METAPHYSICS.

SCHOLARS and critics have attempted in vain to reduce the chaos of topics embraced in the treatises stitched together (not otherwise united) and known under the general title of Metaphysics. But although the ingenious effort of the Hegelian Michelet* was considered by the French Academy worthy of being crowned; and although I admit that he has so manipulated the books as to arrange them into something like systematic sequence; yet I would refer every unbiassed reader to the original itself, and ask him if any one of the books, considered separately, has the coherence and systematic development of topics which would be looked for in a modern work? The fact is we seek for such systematic composition only because we regard, and justly, Aristotle as a mighty precursor; and Philosophy having since become systematic, very much owing to his influence, we are led to infer that he also must have felt the necessities which are now universally felt. They were not felt then. He was the first who made any attempt to reduce knowledge to a system, to make the various branches of inquiry spring from one root. And the first attempt at so enormous a scheme may be excused if it were defective; while the individual portions of the scheme were necessarily in too immature a condition for anything like a connected exposition. We might as well open the 'Natural History of Animals,' and expect to find there something of our systematic Zoology. Indeed, the

* KARL MICHELET, *Examen critique de l'ouvrage d'Aristote intitulé Métaphysique, ouvrage couronné par l'Académie*, Paris, 1836.

presupposition, absurd as it really is, has been generally entertained; and moderns have not only expected to find a classification and philosophic principles in Aristotle's work, but have deluded themselves with the idea that they had found them.* When ancient works are approached in this spirit we need not wonder if they offer little difficulty to an inventive ingenuity. The very want of order which strikes the unbiassed mind, is seized on as a deliberate touch of higher art; and thus Michelet applies the verse

Souvent un beau désordre est un effet de l'art;

without any suspicion, apparently, that the disorder must justify itself by its beauty before it can claim to be art, and that disorder, simply as such, is not strength, but weakness.

It is incompatible with the limits and purpose of this History to expound at any length the various opinions which are jumbled together in the Metaphysics and the Physics. Various attempts have been made to reduce them to order,† and throughout the twenty centuries which have elapsed since they were promulgated, philosophers have quarrelled as to the correct interpretations which these opinions should receive. It is not thus with the systems of Descartes, Spinoza, Locke, Berkeley, Hume, or Kant.

I shall only touch on some of the more important positions. Aristotle so clearly saw and so felicitously explained the necessity of pursuing the true Method, passing from the known to the unknown, instead of beginning with the unknown (and unknowable) to descend to the known, that thinkers of the positive order have in all times found telling passages to quote from him, and thinkers of the metaphysical order have been prone to despise him as an empiricist. He did, indeed, emphatically proclaim the vanity of the *à priori* method. He insisted on the basis of experience; and he always begins an inquiry by enumerating (what is often

* See this point argued at length in my *Aristotle*, chap. xv.

† BIESE, *Die Philosophie des Aristoteles*, 1842; BRANDIS, *Aristoteles und seine Nachfolger*, 1853-57; HEGEL, BUHLE, TENNEMANN, RITTER, ZELLER.

quite superfluous) the opinions commonly received, and the decisions of philosophers, nay, even descending to minute examinations of the various meanings affixed to terms. This eminently unscientific procedure is still largely adopted by men of science, who, indeed, find it easier to expound what men have said about a fact, than what Nature says about it. This is to mistake the history of a science for the exposition of a science. What is it to us, who desire to know the fact itself, that the profound A, or the illustrious B, thought this or that about it? Had they rational data for their thought? If so, let us have the data, and leave the men to history. Aristotle collects the vagrant opinions of common men, and the more or less ingenious guesses of philosophers, hoping to elicit from these the *notiones communes* of speculation. But while thus invoking experience, he is led astray by the assumption that First Principles and Causes (*τὰ πρῶτα καὶ αἴτια* which form the subject of Philosophy) can be accessible through experience. In one sense this is true, and it is the truth which doubtless has misled so many minds. We do arrive through experience at generalizations which transcend experience, at laws wider than any particular instances accessible to us; but even in their widest sweep, these are only expressions of phenomena, and are purely relative; they disclose no absolute causes. Moreover, we have always to be on the alert to see that these generalizations express no more than experience warrants, and are not fictions of our imagination. Our tendency is to substitute the formal for the material elements of conception, to carry the subjective into the objective. And this tendency was so misleading to Aristotle that he considered noumena and cause to be better known than phenomena.

He seems so cautious and judicious when indicating the first steps, that we are surprised to find him suddenly on the other side, with no bridge visible over which he could have passed. In his definition of science we see a recognition of that generality which is deduced from experience, though never given in experience; as when he says that we know

by experience that Socrates was cured by the same remedy that cured Callias and many others, but we know by science that all men attacked by the same disease can be cured by the same remedy. It is in necessity and universality that we recognize science; and these cannot be given in experience. So far all is clear. But when he goes on to explain that science is of a deeper and wider knowledge than experience, because it teaches us the causes and reasons of things, and we only know anything correctly when we know not simply what it is, but why it is, he quits the ground of experience and abruptly takes up his position on that of the unknowable. He nowhere proves, or attempts to prove, that we can know the how and the why; he assumes it. He shows that experience of a thousand instances may lead us to the conviction that a certain remedy will cure a certain malady; but he nowhere shows that this conviction still remains nothing but a generalization of experience, and cannot lead us to a deeper knowledge than that the fact *is* so; *why* it is so we must learn from another source, if it can be learned.

He is at one with Science in affirming that principles form the objects of inquiry; that he who possesses these knows all that is subordinate to them, or may know it; whereas he who knows particulars by no means necessarily knows principles; finally, that principles, being farthest removed from sensations, are the most difficult of attainment. It is only when we come to ascertain what were the principles Aristotle conceived as standing thus at the apex of philosophy, that we see the wide difference between his speculations and modern speculations. There are, he thinks, four first principles or causes.

I. The *formal cause* or *essence*, known under the scholastic titles of 'quiddity' and 'substantial form,' is what may be called the *raison d'être* of a thing. Although form cannot be disjoined from substance in fact, it can in thought,—and that was enough for the ancients. We still preserve the idea in such phrases as, 'the essence of good government

consists in reconciling order with progress; or, 'the essence of a circle consists in the equi-distance of every point in the periphery from the centre.'* The substantial form, in short, is that which makes a thing to be what it is. N.B.—The distinction between the *essence of a thing* and the *essence of our conception of a thing* had not then been admitted into philosophy.

II. The *material cause*—*causa materialis*—ἡ ὕλη καὶ τὸ ὑποκείμενον—is the matter itself, conceived apart from its form. Under all the varieties of things we recognize something which exists as the *subject* of these varieties; for example, the substance of the soul is something distinct from its phenomena.

III. The *motor cause*—efficient cause—ἡ ἀρχὴ τῆς κινήσεως—which plays so great a part in scholasticism, is a conception necessarily added to the two first-named causes, since these alone will not explain movement or change. But inasmuch as change is incessant, there must be some principle of change. Nature is not self-moved; we must, therefore, assume a Prime Mover, himself immoveable.

But even thus we fail to account for the phenomena of this changing universe. What is it which determines each particular movement to be that and not another? What is it which causes the harmony, regularity and beauty of the world? Obviously a fourth cause:—

IV. The *final cause*—τὸ οὐ ἔνεκα καὶ τὰγαθόν. This gives to every movement an aim, and a benevolent aim. The good of each and the good of all is the final cause of every change.†

* 'En contemplant les choses, nous voyons qu'elles sont différentes entr'elles, et que chacune a quelque chose de particulier qui la distingue des autres: c'est ce qu'on appelle l'essence d'une chose, qu'on définit ce qui fait qu'une chose est ce qu'elle est.'—S. GRAVESANDE: *Introd. à la Philosophie*, Leyden, 1737, p. 5. This is strictly Aristotelian, and explains the phrase by which Aristotle defines the formal cause:—ἡ οὐσία καὶ τὸ τί ἦν εἶναι. The phrase is not grammatically explicable. See TRENDLENBERG's edition of the *De Animâ*, 1833, pp. 192–471; or ZELLER: *Philosophie der Griechen*, 1860, ii. 147.

† 'Finis vero est, quo res tendit. Finium alii præoptati, alii consequentes. Præoptati ejus generis sunt, ut valetudo quæ medicamentis et deambulatione com-

It is apparent, on the most casual inspection, that no one of these causes can be verifiable; no one of them is susceptible of any stronger guarantee than that of a certain logical concordance in the assumptions we make respecting them; but inasmuch as they pass beyond the sphere of ideas, and claim to represent external realities, Verification is indispensable; yet it cannot be applied. Such conceptions are, therefore, utterly unscientific. Nevertheless the slow evolution of Science has not altogether disengaged itself from their trammels. Even in the present day there are not wanting men of eminence who firmly uphold the validity of final causes, and believe teleological argument to be an instrument of research. This is owing to the lingering influence of the Subjective Method, an influence almost entirely banished from astronomy, physics, chemistry. The Objective Method teaches that it is idle to assign a final cause, unless we believe that we have, or can have, authoritative knowledge of what actually were the Creator's intentions: and such knowledge Science modestly disclaims; it endeavours to co-ordinate facts; assumptions respecting the intentions of the Creator are not verifiable; if we accept them as we accept other transcendental conceptions, they can only be an unknown quantity in our calculation. The futility of the teleological argument may be seen in this, that until we have discovered the law of succession, until the facts are co-

paratur. Consequentes vero ejus generis sunt, ut medicatio et deambulatio: primum enim valetudinem, deinde ea quæ valetudini faciunt, quærimus.'—HERMOLAUS BARBARUS: *Compendium scientiæ naturalis ex Aristotele*, 1547, Lib. i. p. 6. I cannot quote from this once renowned and now forgotten scholar, without remarking that, although he occupies a prominent place in the correspondence of scholars during the latter part of the fifteenth century, and was thought by ERASMUS to be a 'divine man,' whose name could never die, he has so completely passed out of sight that most Encyclopædias and Biographical Dictionaries do not even mention him. A good account of him is given in JOHNSON: *Life of Linacre*, 1835. SCALIGER speaks of him as 'incomparabilis doctrinæ, divinæ probitatis.'—*Contra Cardanum*, 1557, Exerc. clvii. The notices in TIRABOSCHI: *Storia della Lett. Ital.*, 1807, vi.; in HEEREN: *Geschichte der classischen Litteratur im Mittelalter*, ii. (Werke, 1821–8, v.); and in CORNANI: *I Secoli della Lett. Ital.*, 1818, iii., are obviously at second hand, drawn probably from that marvellous torso of Italian erudition, MAZZUCHELLI: *Gli Scrittori d' Italia*, 1758, vol. ii. parte i. 256.

ordinated, the assumption of a final cause brings with it no illumination, and when the law has been discovered, the addition of the final cause brings no increase of knowledge.

It is a necessary consequence of his conception of Science that it deals not with generalities laboriously arrived at through inductions, and capable of verification both at every ascending step of induction, and every descending step of deduction, but with generalities which are inaccessible to verification. Hegel has a characteristic sneer at the physicists of our day: he says 'Aristotle's Physics are Metaphysics; that which physicists tell us of is what they have seen or what delicate instruments they have made, not what they have thought.'* The sneer falls harmless, for the accusation is ludicrously inexact; but it may be retorted on the metaphysicists that they tell us only what they have thought, and not what they, or any one else, can have *seen*. Aristotle did use his eyes. But unhappily, while duly impressed with the importance of Fact, he was under the dominion of the metaphysical delusion that a better explanation of the causes of phenomena was to be learned from ideas than from phenomena themselves. Thus he not only quitted the observation of phenomena and their relations, for speculations upon Being apart from phenomena, but, by an inevitable consequence of this error, he sought the secret of Being in verbal and logical distinctions.

This is what he found: Being is understood in various senses. It is either substance or accident; it is either a possibility or an actuality. (These four words form the texts of interminable discussions throughout the history of metaphysics. A clear insight into the distinction between objective and subjective existence would have put an end to these discussions at once; but such an insight was long in being reached.) What is Substance? According to Aristotle it has four different meanings:—

I. *Matter*, or the substratum (τὸ ὑποκείμενον), which,

* HEGEL, *Gesch. der Phil.* ii. 337.

because it is the subject of all attributes, and never an attribute itself, is called Being *par excellence*.

II. *Form* (τὸ τι ᾗν εἶναι) is that which is in itself and for itself. Combined with Matter, which is indeterminate, it constitutes individual existence. Thus these two categories complete the idea of Being, the one representing its potentiality (δύναμις), the other its actuality (ἐνέργεια); for Matter is Substance only *in posse*; Form is Substance *in esse*.

III. *The Universal*. This Aristotle rightly regards as an illusion of philosophers, meaning Plato above all. The Universal cannot be Substance, for the substance of an individual belongs only to the individual, whereas the Universal is common to many. Moreover Substance is not an attribute, the Universal is.

IV. *Genus*. This fourth sense in which Substance is understood is rejected on the same grounds as the third.

The distinction, which played so great a part in Arabian and Scholastic philosophy, between Matter and Form, between potential and actual existence, the *δυνάμει ὄν* and the *ἐντελεχείᾳ ὄν* or *ἐντελεχεία ὄν*, is an interesting example of the metaphysical tendency to transport a subjective distinction into the objective world, to make ideas the prototypes of things. Matter was supposed to exist only as a possibility before it received its Form (a confusion of the non-specified with the non-existent), the Form giving it actuality. Brass, for example, before it is made into a statue by the sculptor, exists as brass, in forms quite as real as that of a statue, though the Peripatetics declared it to be indeterminate matter which passed from possibility into actuality on receiving the form of the statue, and, ceasing to be brass in general (which it never was), became a brazen thing.

I have already explained in the Prolegomena the fallacy which is involved in this distinction of potential and actual, and which applies, of course, to the distinction between substance and accident. It is fundamental with Aristotle. Without this distinction his system cannot stand. He never suspected that there was no objective reality in his famous

δύναμις; that whatever is is, and whatever is not is not. He regarded the conquering general as one who, before the battle had been fought, was equally a conqueror, though a conqueror then *in possibility*, ἐν δυνάμει. But it is clear that this existence *post rem* is the resultant of a complex concurrence of conditions, and can only be assigned *ante rem*, on the assumption that we may form our conception of the general before the battle out of all the subsequent conditions. It is perfectly true that could we have clearly seen all the existing conditions, we should also have seen all their effects; could we have seen the strength, skill, and courage of his army, and the weakness of the enemy, we should have foreseen the victory, and esteemed him as the victor. But this would be to annihilate history. We should see simultaneously that which in reality was developed successively. Strictly speaking, the victor both before and after the battle is a man standing in definite relations to conditions past and present. These conditions are in turn related to others; they are products of preceding conditions, and will produce successors. Our conception of the man is determined by our knowledge of these. Events being in reality successive and not simultaneous, and our imperfect vision of existing conditions enabling us only to foresee some of their results, our conceptions of what is possible (*i. e.* what may result) depend on our knowledge of the actual. As a matter of fact nothing really exists till it exists; and nothing exists possibly; for possibility is only the uncertainty of our ignorance.

Matter as potential existence is a subjective fiction. Equally subjective is the distinction between existence *per se* (κατ' αὐτὸ) and existence *per accidens* (κατὰ συμβεβηκός). There is no accident in nature. Everything is essential. The pimple on a philosopher's face, which, according to the conveniences of language, would be called an accident, not pertaining to the essence of the man, unnecessary to our conception of the philosopher, is nevertheless objectively as necessary and essential as the skin it disfigures, or as any other part of the complex group of realities which in their

totality constitute the man. There are grammatical conveniences in separating the predicate from the subject, and logical conveniences in separating the variable from the invariable appearances, designating the former as accidental and the latter as essential. But there are no such distinctions in being.

Substance is commonly understood as that which would remain behind when all the accidents were removed. But a thorough-going analysis leads us to pure Nothing as the termination of such a removal of all accidents. Potential existence is a fiction; useful, it may be, in the department of Logic, but dangerously illusive in Metaphysics.

The theory of Matter and Form is an attempt to solve the problem Plato solved by his theory of Ideas. Aristotle saw clearly enough the untenability of the ideal theory, but his conception of Substantial Forms was only a modification of it, and was open to similar objections. Plato said, that the Idea of an animal pre-existed, and when united with material elements, there was a living reality as a result. Aristotle said, that the animal became a living reality when the potential animal passed into actuality, its vital principle being the Form.

I may here notice another and kindred conception which the Aristotelians seized with great avidity, namely, the confusion of logical with real in the matter of contraries. Thus originated the famous principle of Privation, the contrary of Form. He first laid down the axiom that Form could only be one of two contraries; and as both these contraries could not exist at one and the same instant, the active interference of Privation became necessary to account for the contrary which was at any instant absent. Thus a man must be either cultivated or non-cultivated. He cannot at the same time be both. That which prevents his being either is the Privation of the Form. This verbal jugglery not only found wondering admirers in ancient times, it has found admirers in our own.*

* 'Voilà cette théorie fameuse de la matière et de la forme si souvent reprochée

By ringing the changes on Virtual and Actual, Substance, Form, and Privation, he and his followers built up a theory of the universe, which, as intellectual gymnastics, had undoubted value, but which was not likely to lead to discovery. Indeed the futility of the whole scheme is shown in its utter incompetence to explain even the simple laws of motion. It was an unconscious effort to make Logic do the work of Metaphysics; and the Logic itself had extremely questionable premisses.

à Aristote, et qu'on critiquera sans doute plus d'une fois encore. Pour moi je la trouve simple et vraie.' BARTHÉLÉMY ST.-HILAIRE, *La Physique d'Aristote*, 1862, i. p. xxviii.

CHAPTER V.

ARISTOTLE'S PSYCHOLOGY.

IN my work on Aristotle I have analysed all the writings which directly or indirectly treat of psychological questions; and from it I may extract a few passages containing the leading doctrines.

The first part of the celebrated *De Animâ* is biological. Not until the fifth chapter of the second book does it approach the question of Sensibility.

Having defined sensation 'the result of a motion and an impression,' he starts this difficulty:—Why is there no sensation from the senses themselves? That is to say, why, in the absence of external objects, do not the senses give sensation, since fire and earth and the other elements are present in them, and it is from these that sensation is derived?

The answer runs thus:—Because the sensibility is not in a state of *actuality*, but only of *potentiality*;* and, therefore, it is with it as with a combustible body, which alone, without something on fire, does not burn; for, otherwise, it might set fire to itself, and could stand in need of no actual fire.

He then indicates the distinction between primary and secondary qualities; each of the special senses perceives a special quality, as sight, colour, hearing, sound, &c.; but, besides these, there are qualities more generally perceived, belonging not to one sense alone, but to all in common—such are motion, form, number, magnitude.

* It will not escape the reader that this answer is only a restatement of the difficulty in other words; but it has more the appearance of an answer than that given by HERMOLAUS BARBARUS: *Compendium Scient. Nat. ex Aristotele*, 1547, v., *de Animâ*, p. 51.

'It is difficult to specify the organ percipient of tangible qualities, whether or not it is the flesh, and that which is analogous to flesh in other creatures; yet flesh is only a *medium*, and the essential organ, *πρῶτον αἰσθητήριον*, must be something different and internal. . . . Is, then, this sentient organ within the flesh, or is it the flesh itself which is immediately perceptive? No indication can be obtained from the fact of sensation being simultaneous with tangible impression, for were any one to extend a membrane over his flesh, the part would be equally sensible when touched, and sensible at the moment of contact; and yet, clearly, the sentient organ cannot be in that membrane. . . . When the sentient organ itself is touched, no sensation can there or then be produced, any more than a white object can be seen when placed immediately over the surface of the eye; and thus it is evident that the part perceptive of tangible impressions must be *internal*.' Although not stated here, we know that by this *internal* part, which is perceptive, he means the heart, the central seat of all sensibility.

Chap. XII. is on Perception. 'It must be admitted that each sense is receptive of the *sensible forms* of things (ideas, images) without their *matter*, as wax takes the impress from a seal-ring without the iron or gold of which the ring is made.'

Why, then, do plants not feel, seeing that they have a psychical organ (*μόριον τι ψυχικόν*), and are impressible by tangible objects? The reason is that they want the *central* faculty (*μεσότης*), which alone would admit of their being impressed by sensible forms without the matter. Constituted as they are they receive the matter along with the forms.

Book III., *Chap. I.*, continues the discussion of Sensibility. We have, he says, but five senses. Touch makes us aware of whatever is tangible; all other qualities are perceived, not through touch, but through the media air and water. The sentient organs are constituted of these two simple bodies: the pupil is composed of water, the organ of hearing is com-

posed of air, and the organ of smell is of one or the other. Fire forms no part of any organ; or rather it is an element common to all, since there is nothing sentient without heat.

We are furnished with several senses, instead of one, in order that the common properties of bodies—motion, magnitude, number—may the less readily escape notice. If vision were our only sense, then all other qualities except colour would escape notice, seeming to be identical with it. But as common properties are manifested by different bodies, it is evident that they must also be different.

Chap. II.—'Vision must be by sight, or by some other sense; but if by some other sense, then *it* will be perceptive of sight and colour, the subject of sight, and thus there will be two senses for one office, or the sight itself will be the percipient. But if to perceive by sight is seeing, and if that which is seen is colour, or something having colour, then if any sense is to see, that which sees must first have colour.* It is thus manifest that perception by sight is not a single perception, for when we cannot see, it is still by sight that we judge both of darkness and light, although not in the same manner.'

This, as may be imagined, has been an enticing passage to commentators, and is full of pitfalls both of equivoque and psychological subtlety. Much of the obscurity of psychological questions arises from the tendency, almost irresistible, to refer all perceptions to the organs of sense, instead of to that consciousness which is affected by the organs of sense in their action: *e.g.* perceptions are referred to the retina rather than to the optic centre. Hence, also, the confusion of objective with subjective, as when we speak of a colour which is unseen, of a sound which is unheard.

'If motion, production, and impression, are in the product, it follows that sound and hearing, in an active state, must pre-exist *potentially* in hearing; for the action of the motor

* Wäre nicht das Auge sonnenhaft,
Wie könnten wir das Licht erblicken?
GÖTTE.

exists naturally in that which is acted on. It is, therefore, not necessary that the motor itself should be in motion. The action of a sonorous body is sound, or sounding; that of the auditory sense is hearing; for hearing is double, as sound is double. The same applies to other senses and perceptions. Since production and impression are not in that which acts, but in that which is impressed, so the action of the object of perception, and the sensibility, are in the sentient organ. But while for some senses the two states have been distinguished by separate names—such as sound and hearing—there are others for which one or the other state is without a name. Thus, the action of vision is called sight, but the action of colour is unnamed; the action of the gustatory sense is called taste, while that of savour is without a name. Since the action of the object and the sentient organ is one and the same, though different in mode of acting, it follows that hearing and sound in this sense must be lost together, or together preserved. But this does not hold of such relations in *potentiality*. The earlier writers expressed themselves ill, in saying there could be neither black nor white without sight, nor savours without taste. And yet they were partly right; for as senses and sentient impressions have a twofold acceptation, according to their potentiality or activity, so what was advanced by these writers may be true of one state, and not true of the other. But they reasoned about things considered as isolated which do not in truth admit of being isolated.

'Each sense is perceptive of its own objects, is innate in its own organ, as an organ, to discriminate qualities—Sight judging of black and white, Taste of bitter and sweet. But how do we perceive that qualities differ? Evidently by some sense, because the impressions are sentient; and the flesh cannot be that final sentient, *ἔσχατον αἰσθητήριον*, since to judge of qualities it must of necessity first touch bodies.'

His meaning here is by no means clear. He says emphatically that we have only five senses; that each sense can only discriminate its own objects; that that which perceives

white to be different from sweet cannot be the sense of Taste nor the sense of Sight, yet it must be a sense, because the impression is sentient; finally, he says that the sense cannot be Touch, because to judge of qualities, that sense must first touch bodies—by which he probably means that white and sweet not being tangible, cannot be perceived by Touch.

What, then, is this judicial sense? He has nowhere told us. He enters upon discussions as to whether the judging faculty is divisible or indivisible, and this numerically or locally; but *what* it is, or *where* it is, he has not explained in this treatise. Elsewhere we gather that he means the common sensorium, which is in the front centre (heart) of each animal.*

Chap. III.—'The soul being characterized generally by the faculties, locomotion and thought, judgment and sensibility, it would seem that thought and reflection are considered to be forms of sensation. All writers assume that thinking, like feeling, is corporeal, and that Like is comprehended by Like. But they should have noted the liability of the senses to produce error. It is manifest that feeling is not the same as reflection; the one belonging to all creatures, the other only to a few. Neither is the judging faculty, which discerns right from wrong, to be confounded with sensation; for sensation being derived from particulars is always true, and belongs to all animals; but error lies in judgment, and none are liable to error save those which have reason.'

Imagination is then treated. He says it is neither sensation nor judgment, yet it is never called up without sensation. It is the faculty by which an image of some kind is called up within us, and is to be ranked with those faculties, such as sensation, opinion, and knowledge, by which we form judgments.

Chap. IV. has peculiar interest, being devoted to the *νοῦς*,

* *ἐν τῇ κοινῇ αἰσθητήριον*.—*De Juventute*, i. 467. Compare also *De Somno*, ii. 454.

or intellect, 'that part of the Soul by which it both knows and reflects.'

'If thinking be similar to sensation,' he says, 'then may it be some kind of impression by the object of thought, or some other analogous agency. But that which thinks must then be passive, *ἀπαθὲς*, receptive of the Forms of objects, and identical with the objects in potentiality, though not so in actuality. In a word, the Intellect must be related to objects of thought, as sensibility is to objects of perception. Thus, the so-called Intellect of the Vital Principle (and by Intellect I mean that which judges and compares) has in actuality no existence prior to the act of intelligence.* It is very improbable, therefore, that the mind should have been commingled with the body; for if this were so, it would be a quality of some kind, as hot or cold; or it would have some kind of organ such as there is for sensation; but there is none such.'

'It is well said that the Soul is the *place of Forms* (*τόπος εἰδῶν*); but this is not to be understood of the whole soul, only of the cogitative part; and of Forms, not in actuality, but in potentiality.'

He argues that the reflective faculty is not the sensitive faculty in a state of repose. 'The mind judges of flesh and ideal flesh, either by some different faculty, or by being itself differently affected. It is by sensibility that we judge of hot and cold and other properties of flesh; but it is either by some distinct faculty—or as a curved line is to a straight line—that we judge of ideal flesh.'

Chap. V.—The soul is creative. It is essentially an energizing influence. Knowledge in activity is identical with the object; but in potentiality, it pre-exists in the indi-

* οὐθὲν ἔστιν ἐνεργεία τῶν ὄντων πρὶν νοεῖν. This, if I understand it aright, means that the mind has no substantive existence, but exists only in act, as a function. The passage is very obscure. TRENDLENBURG, who has a long note on the parenthesis, which does not require one, is silent on the only real difficulty. TORSTRICK says, 'intellectus non est actu idea antequam cogitet' (οὐκ ἔστιν αὐτοῦ φύσις οὐδέμια ἀλλ' ἡ αὐτὴ οὐτι δυνατόν = οὐθὲν ἔστιν ἐνεργεία τῶν ὄντων πρὶν νοεῖν), ed. *De Animâ*, p. 198.

vidual. 'Yet rigorously speaking that cannot be said to pre-exist which sometimes is, and sometimes is not, reflected on. But that alone, whatever it be, which is separate from everything else, is deathless and eternal. We have no memory of it because it is passionless (*ἀπαθὲς*); and the impressible mind is perishable, and without it there can be no reflection.'

Chap. VI. briefly reiterates the argument that the senses are free from error, which arises solely from the judgment.

Chap. VII.—The opening sentence may be read as a vague anticipation of the modern hypothesis, that knowledge, or rather the aptitude for acquiring knowledge, becomes developed in the race, and is thus transmitted from parent to child, so that the offspring of European parents is capable of acquiring a higher degree of intellectual development than the offspring of Australian parents reared under similar conditions.

Hume's doctrine* that the mind is simply the succession of impressions is thus formularized at the close of the chapter: 'The mind in the act of thinking is the things thought of.'†

Aristotle has written much about the senses in several works. The treatise *De Sensu*, in the *Parva Naturalia*, is perhaps the best source we can consult; and it may, therefore, be analysed briefly here.

The early philosophers sought in the four elements, earth, air, fire, and water, for the several bodies constituting the senses. As there are five senses, and only four elements were generally recognized, a fifth element was imagined. What that element is, Aristotle does not say; elsewhere we learn it is the Ether.

I.—Vision.

Every one, he says, believes Vision to be of fire; the reason is that men misconceive the phenomenon of sparks

* HUME: *Treatise on Human Nature*, Works, 1826, i. 269.

† ὅπως δὲ ὁ νοῦς ἔστιν ὁ κατ' ἐνεργείαν τὰ πράγματα νοῶν.

dancing before the eyes when rubbed, especially in the dark. But if we cannot deny that we feel and see that which we see, it necessarily follows that the eye sees itself. Now, why have we this sensation only when the eye is rubbed?

The explanation offered is that smooth bodies shine naturally in the dark, though without producing light; now the pupil of the eye is smooth; and when the eye is rubbed it seems as if that which was one became two. The rapid motion makes the eye which is seen and that which sees appear different. The phenomenon is not producible unless the eye be rubbed quickly, and in darkness (I suppose he means by darkness the eye being closed, otherwise the qualification is erroneous), smooth bodies shine no less than certain fish heads, and the ink of the cuttlefish. When the eye is rubbed slowly, the sensation is not such as to make us think that what sees and what is seen are one and the same, so that the eye may see itself as in a mirror.

This, it must be confessed, is not a fortunate attempt at explanation. Newton, in one of his celebrated queries added to the *Optics*, first clearly stated that the sparks which arise when the eye is rubbed, 'arise from such motions excited in the bottom of the eye by the pressure and motion of the finger, as at other times are excited there by light for causing vision.' But it was Johannes Müller, stimulated by the *Farbenlehre* of Goethe, who placed beyond a doubt the fact that each special nerve of sense responds only in one special manner, no matter how various may be the stimuli, so that whatever excites the optic nerve excites a luminous sensation; whatever excites the auditory or gustatory nerves excites sonorous and sapid sensations; and the pressure on the skin-nerve which excites pain, excites in the optic nerve not pain, but a luminous sensation.

Aristotle, knowing nothing of the properties of the optic nerve, could not, of course, give an explanation of the phenomenon. But his explanation is better than that of Empedocles and Plato, who held 'the eye to be of fire.' He asks, *à propos* of this, 'If vision is produced when light

passes from the eye, as from a lantern, why can we not see in the darkness? To pretend that light is extinguished by the darkness, on quitting the eye, is absurd.'

He thinks Democritus 'right in asserting that the vision is "of water," but wrong in asserting it to be an image (appearance, *ἐμφασις*), for the image is produced because the eye is a smooth surface, and vision is not in it, but in the seeing faculty. The affection is a refraction, *ἀνάκλασις γὰρ τὸ πάθος*. But in those days the theory of images and refraction was not understood. Moreover, it is absurd not to have asked why the eye alone can see, and not other bodies.'

'It is correct to say that vision is of water; not because it is of water, but because it is diaphanous, and this quality is common to air. Water, however, retains and receives it better than air, and that is why the pupil and the eye are of water. The soul is assuredly not at the surface of the eye, but within; hence the eye must be translucent and capable of receiving light. Thus men in battle wounded near the temple, so that the optic channels (nerves, *πόροι*) are divided, have felt darkness come on as if a lamp had been extinguished; for indeed the diaphanous and the pupil form a sort of lamp.'

'Thus it is evident we must assign an element to each sense, and say that the part of the eye which sees is of water, that which hears is of air, and that which smells is of fire. Touch is earthy. Taste is a kind of Touch. The eye is a part of the brain; and the brain is the moistest and coldest part of the body. Touch and Taste are connected with the heart, which is the hottest part of the body.'

We have next an exposition of Colour. He defines Light 'the colour of the diaphanous *per accidens*;' or, as he expresses it in the *De Animá*, 'colour is a movement of the diaphanous,' which may be interpreted into an anticipation of the modern undulatory theory, the diaphanous standing for the elastic ether, and the movement being its undulations.

'When there is an igneous body (*πυρῶδες τι*) in the

diaphanous, we have light; when none, we have darkness.* That which we call the diaphanous does not belong exclusively to water, air, and other bodies which are translucent. It is some common nature and force, which not existing separately exists in these bodies and in others, in some more and in some less.†

What that force was supposed to be I cannot discover from the writings now extant; he seems to have considered it sufficiently described by its name.

‘As all bodies have necessarily a limit, so also has the diaphanous, and this limit is colour, which is either the limit of bodies, or at their limit; and hence the Pythagoreans call colour “the surface.”’

‘Colour being the limit of the diaphanous in a limited body, it is possible that that which produces light in the air will also be in the diaphanous in limited bodies, or will not be there; and thus, as in the air there may be light or darkness, so in bodies there may be white and black. The white and black may be placed side by side, so that both may be invisible separately, on account of their minuteness, yet, nevertheless, the result of the two will be visible. But this result can be neither black nor white; but as it must have some colour the colour will be a compound of the two. That is how different colours arise. Many colours are also produced by the combination of the parts: thus three may be arranged with two, or four, and other combinations. Those colours which depend on proportional numbers are harmonious, such as purple and scarlet.‡

* TELESIO held Light to be visible heat—*lux caloris species est*—which is tinged by the colours of the objects through which it passes.—*De Rerum Natura*, 1586, vii. 292–3. This is a much more superficial view than that of Aristotle; and the same may be said of most of his deviations from the doctrines of the Stagirite.

† ἄλλὰ τίς ἐστι κοινὴ φύσις καὶ δύναμις, ἣ χωριστὴ μὲν οὐκ ἔστιν, ἐν τοῖσι δ' ἔστι καὶ τοῖς ἄλλοις σώμασιν ἐνυπάρχει, τοῖς μὲν μᾶλλον τοῖς δ' ἥττον.

‡ For an elaborate exposition of the views held by the ancients on the subject of colour, see PRANTL: *Aristoteles über die Farben, erläutert durch eine Uebersicht der Farbenlehre der Alten*, Munich, 1849. But perhaps the most intelligible account is that given by GOETHE: *Geschichte der Farbenlehre. Werke*, xxxix.

II.—Taste and Smell.

‘These have great similarity, though produced in different organs. The nature of flavours is more evident than that of odours, because our sense of smell is less keen than it is in other animals; on the other hand, we have Touch more sensitive than any other animal, and Taste is a kind of Touch.

‘Although water is insipid by nature, it is necessary that water should contain all flavours which escape our perception on account of their feebleness; or that it should contain a matter which is the germ of all flavours; or finally, that water having no difference of flavour in it, the cause is heat. Thus the flavour of fruit is developed by heat. All the flavours to be found in fruits are to be found also in the earth. At least the ancients thought that water varied with the soils through which it passed, which is evident from salt waters, as salt is also a kind of earth.* Thus water filtered through cinders contracts a bitter taste, and so of the rest. We may hence see why plants have their various flavours; for moisture, like everything else, is modified by its opposite, and dryness is the opposite of moisture. Thus moisture is modified by fire, for fire is by nature dry. Thus when something sapid is dissolved in water, the water becomes sapid; and in the same way nature acts upon the dry element, and the earthy element: it filters the moisture through the dry and earthy, setting it in motion by heat, and giving it all the necessary qualities. This modification of moisture is flavour.’

‘As various colours arise from the combinations of black and white, so various flavours arise from the combinations of sweet and bitter; and these combinations may be proportional or indefinite. Those which are agreeable depend on numerical proportion. The kinds of flavour resemble those of colour: both are seven in number.’

* Who were these ancients? The commentators declare that METRODORUS and ANAXAGORAS are alluded to. Perhaps so; yet the opinion may be found very distinctly expressed by HIPPOCRATES: *De Aëre, Locis et Aquis*.

'Odours are perceptible in air and water; they are transmitted by the diaphanous which is common both to air and water. That water alone suffices is proved by the fact that fish have the sense of smell. Odour is dry flavour conveyed by the moisture in air and water. All sapid bodies are odorous.'

III.—Hearing.

Either Aristotle forgot to include Hearing in this treatise, or else the chapter has been lost. But his views are expressed in the *De Animâ* (ii. 8), from which we may borrow them in a compressed form.

'Sound is both potential and actual; for we say that some bodies, such as sponge, wool, &c., are without sound, and others, as brass, wood, hard and smooth bodies, have sound, because able to make sound *actual* by the *action of the medium between the object and the ear*. Actual sound is the result of something in relation to something, and in something; for its cause is percussion. But with only one body there can be no percussion; so that the sonorous object sounds by its relation to another. Without movement there can be no percussion, and sound is not produced by the percussion of every substance; and hollow bodies create, by reflex, many percussions after the first, owing to the medium within them having been set in motion and being unable to escape. Sound is audible in air, and less distinctly in water.* But neither air nor water can be the cause of sound, since there must be a percussion of solid bodies against each other and against the air.'

'A vacuum is justly called the lord of hearing (*κύριον τοῦ ἀκούειν*), for the air appears to be a vacuum, and when moving continuously creates hearing. But being very diffuent, it gives out no sound, unless when that which is percussed is smooth: in this case the air becomes *uniform* over

* An error which observation might have guarded against; since very simple experience shows water to be a better conductor of sound than air. The velocity with which sound traverses water has been calculated as four times its velocity through air.

its surface, for the surface of a smooth body is *one*. Every sonorous body sets in motion the air which is, by continuity, one with the organ of hearing; and sound being in the air, the air without the organ sets in motion the air within. An animal, therefore, does not hear in every part, for every part does not contain air. The air itself, owing to its diffuence, is without sound; but when confined, its motion produces sound. The air within the ear is so immured as to be incapable of escape;* and this, in order that the sense may perceive accurately all variations of its movement. And thus we are enabled to hear in water; for the water cannot gain access to the congenital air, or pass through the convolutions of the ear. The ear is constantly giving out sound, as a horn does; for the air within it is continually moving in some peculiar manner. Hence we speak of hearing by a vacuum and something resonant, because we hear by the part which contains the air confined within it.'

IV.—Sensation in general.

Having passed the Senses in review, he then touches on certain general questions relative to sensation. And first of its divisibility *ad infinitum*.

If bodies are infinitely divisible, are the impressions they make on us equally so? This question Aristotle answers with manifest superiority over Sir William Hamilton, who, probably from an unsuspected reminiscence, has used the

* The translation in the text came spontaneously from my pen, because I was not aware that the language of Aristotle had puzzled the commentators. (See TRENDLENBURG, p. 386, for an example.) The sense is so plain that I cannot even now comprehend how it has been missed. Aristotle says the air in the ear is immovable or unmoved, *ἀκίνητος*; *immobilis* is BUSSEMAKER's translation, *immoveable* is COLLIER's. Yet inasmuch as the movement of this air is mentioned immediately afterwards, the verbal contradiction is glaring; yet it is only verbal. If we suppose that *ἀκίνητος* has reference to the air which *ἐν τοῖς ὦσιν ἐγκυκαταδύμνται* (is immured within the ears), the meaning is obvious enough. A man is said to be immovable from his studio or bureau without any imputation on his power of movement; but commentators, boggling at small contradictions, and passing by great ones without remark, would point out that a man cannot be immovable if he move at all.

very same illustrations to justify his own doctrine of 'latent consciousness.' That our consciousness may arise out of unconscious modifications is evident, according to Hamilton, in the fact of a *minimum visible*, which is the smallest surface that can be seen: 'It is plain that if we divide this *minimum visible* into two parts, neither half can by itself be an object of vision or visual consciousness. They are, severally and apart, to consciousness as zero. But it is evident that each part must have produced in us a certain modification, real though unperceived, for as the perceived whole is nothing but the union of unperceived halves, so the perception is only the sum of the two modifications, each of which severally eludes our consciousness.'*

The fallacy of this argument may be disclosed in a counter illustration: the stick which at a distance of three feet just touches us, and produces the sensation of contact, will no longer produce that sensation if broken in half, and held towards us at a distance of three feet: it will not affect our consciousness at all: the two halves thus pointed towards us do not produce modifications in our consciousness the sum of which is perceived when the whole touches us. Hamilton's mistake lies in the vague conception of a *minimum visible*, which being the extreme point of visual consciousness, anything beyond that extreme must necessarily pass altogether beyond the sphere of consciousness. It does not become *latent*; for consciousness it becomes *non-existent*. The difference in *degree* has amounted to a difference in *kind*.

Aristotle justly says that the sensible qualities are named such because they produce sensation. 'All magnitude is necessarily sensible. Were it otherwise there would be bodies which had no colour, no weight, nor any other quality, and which consequently would not be perceptible to us, since it is by such qualities that we have perception. But the sensible is composed of sensible qualities, and assuredly not

* HAMILTON: *Lectures on Metaphysics*, 1859, i. 350. It is strange that neither the erudite Hamilton, nor his erudite editors, should have mentioned Aristotle in this place.

of mathematical definitions.* How do we form any judgment of sensible things? By the intellect? But the ideas are only possible when based on sensations. The solution of these questions makes manifest why the kinds of colour, taste, &c., are limited, or finite. It is because in all things which have extremes there must also be intermediate points of limitation; now contraries are extremes, and in all sensible impressions there are contraries, as white and black in colour, sweet and bitter in taste. A body that is continuous therefore may be infinitely divided into *unequal* parts, but its divisibility into *equal* parts is finite. That which is not continuous as a whole has its parts (species) finitely divisible. Since we call the sensible qualities species, and they are always continuous, we must distinguish between the *actual* and *potential*; and hence we do not see the millionth part when we see the million, nor do we hear the quarter-tone when we hear the melody; the interval is imperceptible and is lost in other sounds. It is the same with the infinitely little in other sensibles: they are *potentially* visible, but not *actually* visible when isolated.† Thus the line of one foot is potentially in the line of two feet; but exists actually only when alone. The infinitely small qualities are lost in surrounding bodies, as drops of perfume poured into the sea. This infinitely little which transcends sensation is neither sensible in itself nor by itself, for it is only sensible potentially in the larger quantity.‡

I have preserved the Aristotelian phraseology, but the reader will find little difficulty in disengaging the meaning, and will perceive how this distinction of the potentially and actually visible agrees with and yet rises superior to Hamilton's idea of our being unconsciously modified by that which

* πᾶν εἶναι μέγεθος αἰσθητὸν· ἀδύνατον γὰρ λευκὸν μὲν ὄραν μὴ πρὸς δέ· εἰ γὰρ μὴ οὕτως, ἐνδέχοιτο ἂν εἶναι τι σῶμα μὴδὲν ἔχον χρῶμα, μὴδὲ βάρος, μὴδ' ἄλλο τι τοιοῦτον πάθος· ὥστ' οὐδ' αἰσθητὸν ὄλως· ταῦτα γὰρ τὰ αἰσθητά. Τὸ ἄρ' αἰσθητὸν ἔσται συγκείμενον οὐκ ἐξ αἰσθητῶν. Ἀλλ' ἀναγκαῖον· οὐ γὰρ δὴ ἐκ γε τῶν μαθηματικῶν. vi. 445.

† δυνάμει γὰρ ὁρατά, ἐνεργείᾳ δ' οὐ, ὅταν χωρισθῇ.

never reaches the consciousness, so that two zeros may make an unit.

In the concluding chapter he enters upon the question whether we can have two different sensations in the same instant of time; a question of some psychological interest. He answers it in the negative.

In reviewing Aristotle's opinions on the Senses, it is requisite to bear in mind that he was wholly without the anatomical and physiological, no less than the physical and chemical knowledge, which could have given an assured basis to his speculations. It is a subject which, even in our own day after so much laborious inquiry, is only beginning to be understood; and the psychologist will have many years yet to wait, before science furnishes him with the data he requires.

I must not linger longer over Aristotle, the more so as his researches in Physics and Biology have been handled by me in some detail in the work already mentioned. There I have pointed out how his reliance on experience and induction led him to fruitful results, and how the *à priori* Method substituted for observation and induction led him into error. The combination of the two tendencies is very noticeable in his works. It prevents his being clear and consistent, but it gives his works a singular prestige. All schools find dicta there. All opinions seem more or less anticipated. He stimulates the activity of his readers, provokes them by his obscurity and irreconcilable assertions, and imposes on them by the weight of his intellect, so that they cannot help fancying he had some profound meaning in sentences which were mere guesses, incapable of proof. They meet with many passages which light up whole tracks of inquiry, and many subtle distinctions which have taken their place in philosophy, as for example that of the primary and secondary qualities of body; and they naturally suppose that passages obscure to them have an inner light.

The contribution of Aristotle to the historical evolution of

Science was considerable, although his special inquiries were seldom successful. He instituted the important science of Logic; directed men's attention to the necessity of examining the grounds of knowledge and the forms of thought. He also made philosophy embrace all topics of rational research. But his crowning glory was the impulse he gave to the purely scientific spirit by his constant appeal to Experience as the source of knowledge, and his insistence on the methods of Observation and Induction. If his teaching fostered the vexatious quibbling of schoolmen, it also fostered the scientific research of the Arabs. Both tendencies are more or less due to his influence, and hence it is that his mighty intellect may justly be regarded as the dominant power in all subsequent speculation, till the rise of the modern schools.

SUMMARY OF THE SOCRATIC MOVEMENT.

Socrates appeared during the reign of scepticism. The various tentatives of the early thinkers had all ended in a scepticism, which was turned to dexterous use by the Sophists. Socrates escaped this scepticism by a new development of Method. Armed with this instrument, he withdrew men from metaphysical speculations about Nature, which had led them into the inextricable confusion of doubt. He bade them look at man. Moral Philosophy took the place of physical and metaphysical speculation. The Cyrenaics and the Cynics attempted to carry out his method; but, as they did so in a one-sided manner, their endeavour was only partially successful.

Plato, the youngest and most remarkable of the disciples of Socrates, accepted the Method, and applied it more widely. Nevertheless Ethics furnished the most important of his speculations. Physics were subordinate to and illustrative of Ethics. The Truth—the God-like existence—which he for ever besought men to contemplate that they might share it, had always an ethical object: it was sought by man for his own perfection. How to live in a manner resembling the Gods, was the fundamental problem which he set himself to solve. But there was a germ of scientific speculation in his philosophy, and this germ was developed by his pupil, Aristotle.

The difference between Socrates and Aristotle is immense: Plato, however, fills up the interval. In Plato we see the transition-point of development, both in Method and in Doctrine. Metaphysical speculations are intimately connected with those of Ethics. In Aristotle, Ethics only form one

branch of philosophy: the other branches usurp the larger share of his attention.

One result of Aristotle's labours was precisely this: he brought Philosophy round again to that condition from which Socrates had wrested it; he opened the world again to speculation.

Was then the advent of Socrates nullified? No. The Socratic Epoch conferred the double benefit on humanity of having first brought to light the importance of Ethical Philosophy, and of having substituted a new and incomparably better Instrument for the one employed by the early speculators. That Instrument sufficed for several centuries.

In Aristotle's systematization of the Method, and, above all, in his bringing Physics and Metaphysics again into the region of Inquiry, he paved the way for a new epoch—the epoch of Scepticism; not indeed the unmethodical Scepticism of helpless baffled guessers, like that which preceded Socrates; but the methodical and dogmatic exposure of the vanity of philosophy.

EIGHTH EPOCH.

Second Crisis in Philosophy—The radical imperfection of the Subjective Method again becomes manifest in the impossibility of applying its criterion.

CHAPTER I.

THE SCEPTICS.

§ I. PYRRHO.

IN the curious train which accompanied the expedition of Alexander into India, there was a serious, reflective man, who followed him from a purely philosophical interest: that man was Pyrrho, the founder of the Sceptical philosophy. Conversing with the Gymnosophists of India, he must have been struck with their devout faith in doctrines so unusual to him; and this spectacle of a race of wise and studious men believing a strange creed, and acting upon their belief, may have led him to reflect on the nature of belief in general. He had already, by the philosophy of Democritus, been led to question the origin of knowledge; he had learned to doubt; and now this doubt became irresistible.

On his return to Elis he became remarked for the practical philosophy which he inculcated, and the simplicity of his life. The profound and absolute scepticism with which he regarded all speculative doctrines, had the same effect upon him as upon Socrates: it made him insist wholly on moral doctrines. He was resigned and tranquil, accepting life as

he found it, and guiding himself by the general precepts of common-sense. Socrates, on the contrary, was uneasy, restless, perpetually questioning himself and others, despising metaphysical speculations, but eager for truth. Pyrrho, dissatisfied with all the attempts of his predecessors to solve the great problems they had set to themselves, declared the problems to be insoluble. Socrates was also dissatisfied: he too declared that he knew nothing; but his doubt was an active, eager, questioning doubt, used as a stimulus to investigation, not accepted as a final result of all investigation. The doubt of Pyrrho was a reprobation of all philosophy; the doubt of Socrates was the opening through which a new philosophy was to be established. Their lives accorded with their doctrines. Pyrrho, the grand Priest of Elis, lived and died in happiness, peace, and universal esteem.* Socrates lived in perpetual warfare, was always misunderstood, was ridiculed as a sophist, and perished as a blasphemer.

The precise doctrines of Pyrrho it is now hopeless to attempt to recover. Even in antiquity they were so mixed up with those of his followers, that it was found impossible to separate them. We are forced, therefore, to speak of the sceptical doctrines as they are collected and systematized by that acute and admirable writer, Sextus Empiricus.

The stronghold of Scepticism is impregnable. It is this: There is no criterion of truth. Plato had propounded his Ideal Theory, Aristotle refuted it by proving it to be purely subjective. But then the theory of Demonstration, which Aristotle placed in its stead, was not that equally subjective? What was this boasted Logic, but the systematic arrangement of Ideas obtained originally through Sense? According to Aristotle, knowledge could only be a knowledge of phenomena; although he too wished to make out a science of Causes. And what are Phenomena? Phenomena are

* All the stories about him which pretend to illustrate the effects of his scepticism in real life are too trivial for refutation, being obviously the invention of those who thought Pyrrho ought to have been consequent in absurdity.

the Appearances of things. But where exists the criterion of the truth of these Appearances? How are we to ascertain the exactitude of the accordance of these Appearances with the Things of which they are Appearances? We know full well that Things appear differently to us at different times; appear differently to different individuals; appear differently to different animals. Are any of these Appearances true? If so, *which* are? and *how* do you know which are true?

Moreover reflect on this: We have five senses, each of which reveals to us a different quality in the object. Thus an Apple is presented to us: we see it, smell it, feel it, taste it, hear it bitten; and the sight, smell, feeling, taste, and sound, are five different Appearances—five different Aspects under which we perceive the Thing. If we had three Senses more, the Thing would have three qualities more; it would present three more Appearances: if we had three Senses less, the Thing would have but three qualities less. Are these qualities wholly and entirely dependent upon our Senses, or do they really appertain to the Thing? And do they *all* appertain to it, or only some of them? The differences of the impressions made on different people seem to prove that the qualities of things are dependent on the Senses. These differences at any rate show that things do not present one uniform series of Appearances.

All we can say with truth is, that Things appear to us in such and such a manner. That we have Sensations is true; but we cannot say that our Sensations are true images of the Things. That the Apple we have is brilliant, round, odorous and sweet, may be very true, if we mean that it appears such to our senses; but, to keener or duller vision, scent, tact, and taste, it may be dull, rugged, offensive, and insipid.

Amidst this confusion of sensuous impressions, Philosophers pretend to distinguish the true from the false; they assert that Reason is the Criterion: Reason distinguishes. Plato and Aristotle are herein agreed. Very well, reply the Sceptics, Reason is your Criterion. But what proof have you that this Criterion itself distinguishes truly? You must not

return to Sense: that has been already given up; you must rely upon Reason; and we ask you what proof have you that your Reason never errs? what proof have you that it is *ever* correct. A Criterion is wanted for your Criterion; and so on *ad infinitum*.

The Sceptics maintain that because our knowledge is only the knowledge of Phenomena, and not at all of Noumena—because we only know Things as they *appear* to us, not as they really *are*—all attempt to penetrate the mystery of Existence must be vain; for the attempt can only be made on appearances. But, although absolute Truth is not attainable by man, although there cannot be a science of Being, there can be a science of Appearances. The Phenomena, they admit, are true as Phenomena. What we have to do is therefore to observe and classify Phenomena; to trace in them the resemblances of coexistence and succession, to trace the connections of cause and effect; and, having done this, we shall have founded a Science of Appearances adequate to our wants.

But the age in which the Sceptics lived was not ripe for such a conception: accordingly, having proved the impossibility of a science of Being, they supposed that they had established the impossibility of all Science, and had destroyed all grounds of certitude. It is worthy of remark that modern Sceptics have added nothing which is not implied in the principles of the Pyrrhonists. The arguments by which Hume thought he destroyed all the grounds of certitude are differently stated from those of Pyrrho, but not differently founded; and they may be answered in the same way.

The Sceptics had only a negative doctrine; consequently, only a negative influence. They corrected the tendency of the mind towards accepting its conclusions as adequate expressions of the facts; they served to moderate the impetuosity of the speculative spirit; they showed that the pretended Philosophy of the day was not so firmly fixed as its professors supposed. It is curious, indeed, to have

witnessed the gigantic efforts of a Socrates, a Plato, and an Aristotle, towards the reconstruction of Philosophy, which the Sophists had brought to ruins—a reconstruction, too, on different ground—and then to witness the hand of the iconoclast smiting down that image, to witness the pitiless logic of the Sceptic undermining that laboriously-constructed edifice, leaving nothing in its place but another heap of ruins, like that from which the edifice was built; for, not only did the Sceptics refute the notion that a knowledge of Appearances could ever become a knowledge of Existence, not only did they exhibit the fallacious nature of sensation, and the want of certitude in the affirmations of Reason, they also attacked and destroyed the main positions of that Method which was to supply the ground of certitude; they attacked Induction and Definitions.

Of Induction, Sextus, in one brief, pregnant chapter, writes thus:—‘Induction is the conclusion of the Universal from individual things. But this Induction can only be correct in as far as all the individual things agree with the Universal. This universality must therefore be verified before the Induction can be made: a single case to the contrary would destroy the truth of the Induction.’*

We will illustrate this by an example. The whiteness of swans shall be the Induction. Swans are said to be white because all the individual swans we may have seen are white. Here the Universal (whiteness) seems induced from the particulars; and it is true in as far as all particular swans are white. But there are a few black swans; one of these particular black swans is sufficient to destroy the former Induction. If, therefore, says Sextus, you are not able to verify the agreement of the universal with every particular, *i.e.* if you are not able to prove that there is no swan not black, you are unable to draw a certain and accurate Induction. That you cannot make this verification is obvious.

In the next chapter Sextus examines Definitions. He

* *Pyrrhon. Hypot.* vol. ii. c. xv. p. 94. The edition I use is the Paris folio of 1621, the first of the Greek text.

pronounces them perfectly useless. If we know the thing we define, we do not comprehend it because of the definition, but we impose on it the definition because we know it; and if we are ignorant of the thing we would define, it is impossible to define it.

Although the Sceptics destroyed the dogmatism of their predecessors, they did not substitute any dogmatism of their own in its place. The nature of their scepticism is happily characterized by Sextus in his comparison of them with Democritus and Protagoras. Democritus had insisted on the uncertainty of sense-knowledge; but he concluded therefrom that objects had no qualities at all resembling those known to us through sensation. The Sceptics contented themselves with pointing out the uncertainty, but did not pronounce decisively whether the qualities existed objectively or not.

Protagoras also insisted on the uncertainty, and declared man to be the measure of truth. He supposed that there was a constant relation between the transformations of matter and those of sensation; but these suppositions he affirmed dogmatically; to the Sceptic they were uncertain.

This general incertitude often betrayed the Sceptics into ludicrous dilemmas, of which many specimens have been preserved. Thus they said, ‘We assert nothing—no, not even that we assert nothing.’ But if the reader wishes to see this distinction between a thing *seeming* and a thing *being*, ridiculed with a truly comic gusto, he should turn to Molière’s *Mariage Forcé*, act i. sc. 8. Such follies form no portion of our subject, and we leave them with some pleasure to direct our attention to more worthy efforts of human ingenuity.

CHAPTER II.

THE EPICUREANS.

§ I. EPICURUS.

THE Epicureans are condemned in their names. We before noticed how the meaning attached to the name of Sophist inadvertently gives a bias to every judgment of the School, and renders it extremely difficult to conceive the members of that School otherwise than as shameless rogues. Equally difficult is it to shake off the influence of association with respect to the Epicureans; although historians are now pretty well agreed in believing Epicurus to have been a man of pure and virtuous life, and one whose doctrines were moderate and really inculcating abstemiousness.

Epicurus was born Ol. 109 (B.C. 342), at Samos, according to some; at Gargettus, in the vicinity of Athens, according to others. His parents were poor, his father a teacher of grammar. At a very early age, he tells us, his philosophical career began: so early as his thirteenth year. But we must not misunderstand this statement. He dates his career from those first questionings which occupy and perplex most young minds, especially those of any superior capacity. He doubtless refers to that period when, boy-like, he puzzled his teacher with a question beyond that teacher's power. Hearing the verse of Hesiod wherein all things are said to arise from Chaos, Epicurus asked, 'And whence came Chaos?'

'Whence came Chaos?' Is not this the sort of question to occupy the active mind of a boy? Is it not by such questions that we are all led into philosophy? To philosophy

he was referred for an explanation. The writings of Democritus fell in his way, and were eagerly studied; the writings of others followed; and, his vocation being fixed, he sought instruction from many masters. But from all these masters he could gain no solid convictions. They gave him hints; and working upon the materials they furnished, he produced a system of his own, by which we presume he justified his claim to being self-taught.

His early years were agitated and unsettled. He visited Athens at eighteen, but remained there only one year. He then passed to Colophon, Mitylene, and Lampsacus. He returned to Athens in his six-and-thirtieth year, and there opened a school, over which he presided till his death, Ol. 127 (B.C. 272).

The place he chose for his school was the famous Garden, a spot pleasantly typical of his doctrine. The Platonists had their Academic Grove; the Aristotelians walked along the Lyceum; the Cynics growled in the Cynosarges; the Stoics occupied the Porch; and the Epicureans had their Garden.

Here, in the tranquil Garden, in the society of his friends, he passed a peaceful life of speculation and enjoyment. The friendship which existed amongst them is well known. In a time of general scarcity and famine they contributed to each other's support, showing that the Pythagorean notion of community of goods was unnecessary amongst friends, who could confide in each other. At the entrance of the Garden they placed this inscription: 'The hospitable keeper of this mansion, where you will find pleasure the highest good, will present you liberally with barley-cakes and water fresh from the spring. The gardens will not provoke your appetite by artificial dainties, but satisfy it with natural supplies. Will you not be well entertained?'

The Garden has often been called a sty; and the name of Epicurean has become the designation of a sensualist. But, in spite of his numerous assailants, the character of Epicurus has been rescued from contempt, both by ancient and by modern critics. Diogenes Laertius, who gives some of the

accusations in detail, easily answers them by an appeal to facts; and modern writers have been at no loss to discover the motive of the ancient calumnies, which mostly proceeded from the Stoics. A doctrine like that of Epicurus would, at all times, lend itself to gross misrepresentation; but in an epoch like that in which it appeared, and contrasted with a doctrine so fiercely opposed to it as the doctrine of the Stoics, we cannot wonder if the bitterness of opposition translated itself into calumny. It is one of the commonest results of speculative differences to make us attribute to our opponent's opinions the consequences which *we* deduce from them, as if they were indubitably the consequences he deduces for himself. Our opinions are conducive to sound morality: of *that* we are convinced; and being so convinced, it is natural for us to believe that contrary opinions must be immoral. Our opponent holds contrary, *ergo* immoral opinions; and we proclaim his immorality as an unquestionable fact. In this, however, there is a slight forgetfulness, namely, that our opponent occupies exactly similar ground, and what we think of him, he thinks of us.

The Stoics had an ineffable contempt for the weakness and effeminacy of the Epicureans. The Epicureans had an ineffable contempt for the spasmodic rigidity and unnatural exaggeration of the Stoics. They libelled each other; but the libels against the Epicureans have met with more general credit than those against the Stoics, from the more imposing character of the latter, both in their actions and doctrines.

Epicurus is said to have been the most voluminous of all Greek Philosophers, except Chrysippus; and although none of these works are extant, yet so many fragments are preserved here and there, and there is such ample testimony as to his opinions, that there are few writers of whose doctrine we can speak with greater certainty; the more so as it does not in itself present any difficulties of comprehension.

Nothing can be more unlike Plato and Aristotle than Epicurus; and this difference may be characterized at the outset by their fundamental difference in the conception of

Philosophy, which Epicurus regarded as the Art of Life, and not the Art of Truth. Philosophy, he said, was the power (*ἐνέργεια*) by which Reason conducted man to happiness. The investigations of Philosophy he despised: they were not only uncertain, but contributed nothing towards happiness; and of course Logic, the instrument of Philosophy, found no favour in his sight. His system was, therefore, only another form of Scepticism, consequent on his dissatisfaction with previous systems. Socrates had taught men to regard their own nature as the great object of investigation; but man does not interrogate his own nature out of simple curiosity, or for simple erudition: he studies his nature in order that he may improve it; he learns the extent of his capacities in order that he may properly direct them. The aim, therefore, of all such inquiries must be Happiness. And what constitutes Happiness? Upon this point systems differ: all profess to teach the road to Happiness, and all point out divergent roads. There can be little dispute as to what is Happiness, but infinite disputes as to the way of securing it.* In the Cyrenaic and Cynic Schools we saw this question leading to very opposite results; and the battle we are now to see renewed on similar ground between the Epicureans and the Stoics.

Epicurus, like Aristippus, declared that Pleasure constituted Happiness; all animals instinctively pursue it, and as instinctively avoid Pain. Man should do deliberately that which animals do instinctively. Every Pleasure is in itself good; but, in comparison with another, it may become an evil. The Philosopher differs from the common man in this: That while they both seek Pleasure, the former knows how to forego certain enjoyments which will cause pain and vexation hereafter; whereas the common man seeks only the immediate enjoyment. The Philosopher's art enables him to

* At a meeting of Socialists in London to discuss in a friendly way the means of reforming the world, M. Pierre Leroux rose and addressed his brethren thus: '*Nous voulons arriver au Paradis, n'est-ce pas? n'est-ce pas? Eh bien! il ne s'agit que d'y arriver! Voilà!*'

foresee what will be the result of his acts; and, so foreseeing, he will not only avoid those enjoyments which occasion grief, but know how to endure those pains from which surpassing pleasure will result.

True happiness, then, is not the enjoyment of the moment, but the enjoyment of the whole life. We must not seek to intensify, but to equalize: not debauchery to-day and satiety to-morrow, but equable enjoyment all the year round. No life can be pleasant except a virtuous life; and the pleasures of the body, although not to be despised, are insignificant when compared with those of the soul. The former are but momentary; the latter embrace both the past and future. Hence the golden rule of Temperance. Epicurus not only insisted on the necessity of moderation for continued enjoyment, he also slighted, and somewhat scorned, all exquisite indulgences. He fed moderately and plainly. Without interdicting luxuries, he saw that Pleasure was purer and more enduring if luxuries were dispensed with. This is the ground upon which Cynics and Stoics built their own exaggerated systems. They also saw that simplicity was preferable to luxury; but they pushed their notion too far. Contentedness with a little, Epicurus regarded as a great good; and he said, wealth consisted not in having great possessions, but in having small wants. He did not limit man to the fewest possible enjoyments: on the contrary, he wished him in all ways to multiply them; but he wished him to be able to live upon little, both as a preventive against ill-fortune, and as an enhancement of rare enjoyments. The man who lives plainly has no fear of poverty, and is better able to enjoy exquisite pleasures.

Virtue rests upon Free Will and Reason, which are inseparable: since, without Free Will our Reason would be passive, and without Reason our Free Will would be blind. Everything, therefore, in human actions which is virtuous or vicious depends on man's *knowing* and *willing*. Philosophical education consists in accustoming the Mind to judge accurately, and the Will to choose manfully.

From this slight outline of his Ethical doctrine may be seen how readily it furnished arguments both to assailants and to defenders. We may also notice its vagueness and elasticity, which would enable many minds to adapt it to their virtues or to their vices. The luxurious would see in it only an exhortation to their own vices; the temperate would see in it a scientific exposition of temperance.

Epicureanism, in leading man to a correct appreciation of the moral end of his existence, in showing him how to be truly happy, has to combat with many obstructions which hide from him the real road of life. These obstructions are his illusions, his prejudices, his errors, his ignorance. This ignorance is of two kinds: first, ignorance of the laws of the external world, which creates absurd superstitions, and troubles the soul with false fears and false hopes; hence the necessity of some knowledge of Physics. The second kind of ignorance is that of the nature of man; hence the necessity of the Epicurean Logic called *Canonic*, which is a collection of rules respecting human reason and its application.

The Epicurean psychology and physics were derived from the Democritean. The atoms of which the universe is formed are supposed to be constantly throwing off some of their parts, *ἀπορροαί*: and these, in contact with the senses, produce sensation, *αἴσθησις*. But Epicurus did not maintain that these *ἀπορροαί* were *images* of the atoms; he believed them to have a certain resemblance to their atoms, but was unable to point out where, and in how far this resemblance exists. Every sensation must be true as a sensation; and, as such, it can neither be proved nor contradicted; it is *ἄλογος*. The sensations of the insane and the dreaming are also true; and, although there is a difference between their sensations and those of sane and waking men, yet Epicurus confessed himself unable to determine in what the difference consists. Sensations however do not alone constitute knowledge; man has also the faculty of conception, *πρόληψις*, which arises from the repeated iteration of sensation: it is recollection of various sensations; or, as Aristotle would say, the general

idea gathered from particular sensations. It is from these conceptions that the general ideas are formed, and it is in these general ideas that error resides. A sensation may be considered either in relation to its object, or in relation to him who experiences it; in the latter case it is agreeable or disagreeable, and renders the sentiments, τὰ πάθη, the basis of all morality.

With such a basis, we may readily anticipate the nature of the superstructure. If agreeable and disagreeable sensations are the origin of all moral phenomena, there can be no other moral rule than to seek the agreeable and to avoid the disagreeable; and whatever is pleasant becomes the great object of existence.

The Physics of Epicurus are so similar to the Physics of Democritus that we need not occupy our space with them.

On reviewing the whole doctrine of Epicurus, we find in it that scepticism which the imperfect Philosophy of the day necessarily brought to many minds, in many different shapes; and the consequence of that scepticism was the effort to find a refuge in Morals, and the attempt to construct Ethics on a philosophic basis. The attempt failed because the basis was not broad enough; but the attempt itself is worthy of notice, as characteristic of the whole Socratic movement; for, although the Socratic Method was an attempt at reconstructing Philosophy, yet that reconstruction itself was only attempted with a view to morals. Socrates was the first to bring Philosophy down from the clouds; he was the first to make it the basis of Morality, and in one shape or other all his followers and all the schools that issued from them, kept this view present to their minds. The Epicureans are therefore to be regarded as men who ventured on a solution of the great problem, and failed because they only saw a part of the truth.

CHAPTER III.

THE STOICS.

§ I. ZENO.

THE Stoics were a large sect, and of its members so many have been celebrated, that a separate work would be needed to chronicle them all. From Zeno, the founder, down to Brutus and Marcus Antoninus, the sect embraces many Greek and Roman worthies, and not a few solemn pretenders. Some of these we would willingly introduce; but we are forced to confine ourselves to one type; and the one we select is Zeno.

He was born at Citium, a small city in the island of Cyprus, of Phœnician origin, but inhabited by Greeks. The date of his birth is uncertain. His father was a merchant, in which trade he himself engaged, until his father, after a voyage to Athens, brought home some works of Socratic philosophers; these Zeno studied with eagerness and rapture, and determined his vocation.

When about thirty, he undertook a voyage both of interest and pleasure, to Athens, the great mart both for trade and philosophy. Shipwrecked on the coast, he lost the whole of his valuable cargo of Phœnician purple; and, thus reduced to poverty, he willingly embraced the doctrine of the Cynics, whose ostentatious display of poverty had captivated many minds.

There is an anecdote of his having one day read Xenophon's *Memorabilia*, in a bookseller's shop, with such delight that he asked where such men were to be met with. At that moment Crates the Cynic passed by: the bookseller pointed him out.

to Zeno, and bade him follow Crates. He did so; and he became a disciple. But he could not long remain a disciple. The gross manners of the Cynics, so far removed from true simplicity, and their speculative incapacity, soon caused him to seek a master elsewhere. Stilpo, of Megara, became his next instructor; and from him he learned the art of disputation, which he subsequently practised with such success.

But the Megaric doctrine was too meagre for him. He was glad to learn from Stilpo; but there were things which Stilpo could not teach. He turned, therefore, to the expositors of Plato: Xenocrates and Polemo. In the philosophy of Plato there is, as before remarked, a germ of Stoicism; but there is also much that contradicts Stoicism, and so, we presume, Zeno grew discontented with that also.

After twenty years of laborious study in these various schools, he opened one for himself, wherein to teach the result of all these inquiries. The spot chosen was the Stoa, or Porch, which had once been the resort of the Poets, and was decorated with the pictures of Polygnotus. From this Stoa the school derived its name.

As a man, Zeno appears deserving of the highest respect. Although sharing the doctrines of the Cynics, he did not share their grossness, their insolence, or their affectation. In person he was tall and slender; and although of a weakly constitution, he lived to a great age, being rigidly abstemious, feeding mainly upon figs, bread, and honey. His brow was furrowed with thought; and this gave a tinge of severity to his aspect, which accorded with the austerity of his doctrines. So honoured and respected was he by the Athenians, that they entrusted to him the keys of the citadel; and when he died they erected to his memory a statue of brass. His death is thus recorded:—In his ninety-eighth year, as he was stepping out of his school, he fell and broke his finger. He was so affected at the consciousness of his infirmity that, striking the earth, he exclaimed, 'Why am I thus importuned? Earth, I obey thy summons!' He went home and strangled himself.

In the history of humanity there are periods when society seems fast dissolving; when ancient creeds have lost their majesty, and new creeds want disciples: when the onlooker sees the fabric tottering, beneath which his fellow-men are crowded either in sullen despair or in blaspheming levity, and, seeing this, he feels that there is safety still possible, if men will but be bold; he raises a voice of warning, and a voice of exhortation; he bids them behold their peril and tremble, behold their salvation and resolve. He preaches to them a doctrine they had been unused to hear, or, hearing it, unused to heed; and by the mere force of his own intense conviction he gathers round him some believers who are saved. If the social anarchy be not too widely spread, he saves his country by directing its energies in a new channel; if the country's doom is sealed, he makes a gallant effort, though a vain one, and 'leaves a spotless name to after-times.'

Such a man was Zeno. Greece was fallen; but hope still remained. A wide-spread disease was fast eating out the vigour of its life: Scepticism, Indifference, Sensuality, Epicurean softness were only counteracted by the aspiring but vague works of Plato, or the vast but abstruse system of Aristotle. Greek civilization was fast falling to decay. A little time and Rome, the she-wolf's nursling, would usurp the place which Greece had once so proudly held—the place of vanguard of European civilization. Rome, the mighty, would take from the feeble hands of Greece the trust she was no longer worthy to hold. There was a presentiment of Rome in Zeno's breast. In him the manly energy and stern simplicity which were to conquer the world; in him the deep reverence for moral worth, which was the glory of Rome, before, intoxicated with success, she sought to ape the literary and philosophical glory of old Hellas. Zeno the Stoic had a Roman spirit; and this is the reason why so many noble Romans became his disciples: he had deciphered the wants of their spiritual nature.

Alarmed at the scepticism which seemed inevitably following speculations of a metaphysical kind, Zeno, like Epicurus,

fixed his thoughts principally upon Morals. His philosophy boasted of being eminently practical, and connected with the daily practices of life. But, for this purpose, the philosopher must not regard pleasure so much as Virtue: nor does Virtue consist in a life of contemplation and speculation, but in a life of activity; for what is Virtue?—Virtue is manhood. And what are the attributes of man? Are they not obviously the attributes of an *active* as well as of a *speculative* being? and can that be Virtue which excludes or neglects man's activity? Man, O Plato, Man, O Aristotle, was not made for speculation only; wisdom is not his only pursuit. Man, O Epicurus, was not made for enjoyment only; he was made also to *do* somewhat, and to *be* somewhat. Philosophy?—It is a great thing; but it is not all. Pleasure?—It is a slight thing; and, were it greater, could not embrace man's entire activity.

The aim, then, of man's existence is neither to be wise nor to enjoy, but to be virtuous—to realize his manhood. To this aim, Philosophy is a means, and Pleasure may also be one; but they are both subordinate. Before we can be taught to lead a virtuous life, we must be taught what virtue is. Zeno thought, with Socrates, that Virtue was the knowledge of Good; and that Vice was nothing but error. If to *know* the good were tantamount to the pursuit and practice of it, then was the teacher's task easily defined: he had to explain the nature of human knowledge, and to explain the relations of man to the universe.

Thus, as with Socrates, does Morality find itself inseparably connected with Philosophy; and more especially with psychology. A brief outline of this psychology becomes therefore necessary as an introduction to the Stoical Morality.

Zeno rejected the Platonic theory of knowledge, and accepted, though with some modifications, the Aristotelian theory. 'Reminiscence' and 'Ideas' were to him mere words. Ideas he regarded as the universal notions formed by the mind from a comparison of particulars. Sense furnished all the materials of knowledge; Reason was the plastic

instrument whereby these materials were fashioned. But those who maintain that Sense furnishes us the materials of knowledge are hampered with this difficulty: By what process does Sense perceive? What relation is there between Sense and the sensible Thing? What proof have we of those sensations being conformable with the Things? This difficulty is a serious one, and early occupied speculators. Indeed, this question may be pronounced the vital question of all philosophy; upon its solution depends to a great extent the solution of all other questions. Let us state it more clearly in an illustration.

At the distance of fifty yards you descry a tower: it is round. What do you mean by saying, It is round? You mean that the impression made upon your sense of sight is an impression similar to that made by some other objects, such as trees, which you, and all men, call round. Now, on the supposition that you never approached nearer that tower, you would always believe it to *be* round, because it *appeared* to be so. But, as you are enabled to approach it, and as you *then* find that the tower is square, and not round, you begin to examine into this difference. It appeared to be round at that distance; and yet you say it really *is* square. A little knowledge of optics seems to explain the difference; but does not. At fifty yards, you say, it appears to be round; but it really is square. At fifty yards, we reply, it appears to be round, and at one yard it appears to be square: it *is* neither: both round and square are conceptions of the mind, not attributes of things: they have a subjective, not an objective existence.

Thus far the ancient sceptics penetrated; but, seeing herein an utter destruction of all certainty in sense-knowledge, and compelled to admit that Sense was the only source of knowledge, they declared all knowledge a deceit. The discovery of the real issue whence to escape this dilemma—the recognition of the uncertainty of sense-knowledge, and the reconciliation of that theory with the natural wants of the speculative mind by the twofold admission of the relativity

of all knowledge and of relative certainty—reconciling scepticism with belief, and both with reason, was the work of after-times.

Those who believed that the senses gave true reports of the Things which affected them, were driven to invent some hypothesis explanatory of the relation subsisting between the Object and the Subject, the Thing and the Sense. We have seen how *eidola*, airy images affluent from Things, were invented to establish a direct connection between the Subject and the Object. Zeno, acutely enough, saw that an image detaching itself in an airy form from the Object, could only represent the superficies of that Object, even if it represented it correctly. In this way the hypothesis of *eidola* was shown to be no more than an hypothesis to explain Appearances; whereas the real question is not, How do we perceive Appearances? but how do we perceive Objects? If we only perceive their superficies, our knowledge is only a knowledge of phenomena, and we fall into the hands of the Sceptics.

Zeno saw the extent of the difficulty, and tried to obviate it. But his hypothesis, though more comprehensive, was equally feeble in its foundation. He assumed that Sense *could* penetrate beneath Appearance, and perceive Substance itself.

As considerable confusion exists on this point, we shall confine ourselves to the testimony of Sextus Empiricus, the most satisfactory of all. In his book directed against the Logicians, he tells us, 'the Stoics held that there was one criterion of truth for man, and it was what they called the Cataleptic Phantasm' (τὴν καταληπτικὴν φαντασίαν, i.e. the Sensuous Apprehension). We must first understand what they meant by the Phantasm or Appearance. It was, they said, an impression on the mind (τύπωσις ἐν ψυχῇ). But from this point commence their differences; for Cleanthus understood, by this impression, an impression similar to that made by the signet ring upon wax, τοῦ κηροῦ τύπωσιν. Chrysippus thought this absurd; for, said he, seeing that thought conceives many objects at the same time, the soul must upon that hypothesis receive many impressions of figures. He thought that

Zeno meant by *impression* nothing more than a *modification* (ἐτεροίωσις): likening the soul to the air, which when many voices sound simultaneously, receives simultaneously the various alterations, but without confounding them. Thus the Soul unites several perceptions which correspond with their several objects.'

This is extremely ingenious, and the indication of Sensation as a modification of the Soul, opens a shaft deep down into the dark region of psychology. But, if it lets in some of the light of day, it also brings into notice a new obstacle. This soul, which is modified, does it not also in its turn exercise an influence? If wine be poured into water, it modifies the water; but the water also modifies the wine. There can be no action without reaction. If a stone is presented to my sight, it modifies my soul; but does the influence of the stone remain unmodified?—No; it receives from me certain attributes, certain form, colour, taste, weight, &c.; these my soul bestows on it; in itself it does not possess them.

Thus is doubt again spread over the whole question. The soul modifying the object in sensation, can it rely upon the truth of the sensation thus produced? Has not the wine become watery, no less than the water vinous? These consequences, however, Zeno did not foresee. He was intent upon proving that the soul really apprehended objects, not as *eidola*, not as wax receives the impression of a seal, but in absolute truth. Let us continue to borrow from Sextus Empiricus.

The Phantasm, or Appearance, which causes that Modification of the Soul which we name Sensation, is also understood by the Stoics as we understand ideas; and in this general sense, they say that there were three kinds of Phantasms: those that were probable, those that were improbable, and those that were neither one nor the other. The first are those that cause a slight and equable motion in the soul: such as those which inform us that it is day. The second are those which contradict our reason: such as

if one were to say during the day-time, 'Now the sun is not above the earth;' or, during the night-time, 'Now it is day.' The third are those, the truth of which it is impossible to verify: such as this, 'The number of the stars is even;' or, 'the number is odd.'

Phantasms, when probable, are true or false, or both true and false at the same time, or neither true nor false. They are true when they can be truly affirmed of anything; false if they are wrongly affirmed, such as when one believes an oar dipped in the water to be broken, because it appears so. When Orestes, in his madness, mistook Electra for a Fury, he had a Phantasm both true and false: true, inasmuch as he saw something, viz. Electra; false, inasmuch as Electra was not a Fury.

Of true Phantasms, some are cataleptic (apprehensive), and others non-cataleptic. The latter are such as arise from disease or perturbation of the mind: as for instance the innumerable Phantasms produced in frenzy and hypochondria. The cataleptic Phantasm is that which is impressed by an object which exists, which is a copy of that object, and can be produced by no other object. Perception is elsewhere said to be a sort of light, which manifests itself at the same time that it lights up the object from which it is derived.

Zeno distinctly saw the weakness of the theories proposed by others; he failed however in establishing any better theory in their place. Sextus Empiricus may well call the Stoical doctrine vague and undecided. How are we to distinguish the true from the false in appearances? Above all, how are we to learn whether an impression exactly coincides with the object? This is the main problem, and Zeno pretends to solve it by a circular argument. Thus: given the problem, how are we to distinguish the true impressions from the false impressions? the solution offered is, by ascertaining which of the impressions coincide with the real objects: in other words, by distinguishing the true impressions from the false.

Having a perception of an object is not knowledge: for knowledge, it is necessary that reason should assent. Perception comes from without; assent from within: it is the free exercise of man's reason. Science is composed of perceptions so solidly established that no argumentation can shake them. Perceptions not thus established only constitute Opinion.

This is making short work with difficulties, it must be confessed; but the Stoics were eager to oppose something against the Scepticism which characterized the age; and, in their eagerness to build, they did not sufficiently secure their foundations. Universal doubt they felt to be impossible. Man must occasionally assent, and that too in an absolute manner. There are perceptions which carry with them irresistible conviction. There would be no possibility of action unless there were some certain truth. Where then is conviction to stop? That all our perceptions are not correct, every one is willing to admit. But which are exact, and which are inexact? What *criterion* have we? The criterion we possess is Evidence. 'Nothing can be clearer than evidence,' they said; 'and, being so clear, it needs no definition.' This was precisely what it *did* want; but the Stoics could not give it.

In truth, the Stoics, combating the Scepticism of their age, were reduced to the same strait as Reid, Beattie, and Hutcheson, combating the Scepticism of Hume: reduced to give up Philosophy, and to find refuge in Common-Sense. The battle fought by the Stoics is very analogous to the battle fought by the Scotch philosophers, in the ground occupied, in the instruments employed, in the enemy attacked, and the object to be gained. They both fought for Morality, which they thought endangered.

We shall subsequently have to consider the Common-Sense theory: enough if we now call attention to the curious *ignoratio elenchi*—the curious misconception of the real force of the enemy, and the utter helplessness of their own position, which the Common-Sense philosophers

displayed. The Sceptics had made an irresistible onslaught upon the two fortresses of Perception and Reason. They showed Perception to be based upon Appearance; and Appearance could not be Certainty. They showed also that Reason was unable to distinguish between Appearance and Certainty, because, in the first place, it had nothing but Phenomena (Appearances) to build upon; and, in the second place, because there is no criterion to apply to Reason itself. Having gained this victory, they proclaim Philosophy no longer existent. Whereupon the Stoics valorously rise, and, taking their stand upon Common-Sense, believe they rout the forces of the Sceptics; believe they retake the lost fortresses by declaring that perceptions are true as well as false, and that you may distinguish the true from the false, by—distinguishing them: and that Reason has its criterion in Evidence, which requires no criterion, it is so clear. This seems pretty much the same as if the French were to invade Great Britain; possess themselves of London, Edinburgh, and Dublin, declare England the subject of France, and patriots were then to declare that the French were to be driven home again by a party of volunteers taking their stand upon Hampstead Heath, displaying the banners of England, and with loud alarums proclaiming the invaders defeated.

But it is time to consider the ethical doctrines of the Stoics; and to do this effectually we must glance at their conception of the Deity. There are two elements in Nature. The first is *ἔλη πρώτη*, or primordial matter; the passive element from which things are formed. The second is the active element, which forms things out of matter: Reason, Destiny (*εἰμαρμένη*), God. The divine Reason operating upon matter bestows upon it the laws which govern it, laws which the Stoics called *λόγοι σπερματικοί*, or productive causes. God is the Reason of the world.

With this speculative doctrine it is easy to connect their practical doctrine. Their ethics are easily to be deduced from their theology. If Reason is the great creative law, to

live conformably with Reason must be the practical moral law. If the universe be subject to a general law, every part of that universe must also be duly subordinate to it. The consequence is clear: there is but one formula for Morals, and that is, 'Live harmoniously with Nature,' *ὁμολογομένως τῇ φύσει ζῆν*.

This is easily said. An anxious disciple might however desire greater precision, and ask, Is it universal nature, or is it the particular nature of man, that I am to live in unison with? Cleanthes taught the former; Chrysippus the latter; or, we should rather say, taught that both individual and universal nature should be understood by the formula. And this appears to have been the sense in which it was usually interpreted.

The distinctive tendency of the formula cannot be mistaken: it is to reduce everything to Reason, which, as it has supremacy in creation, must also have supremacy in man. This is also the Platonic conception. It makes Logic the rule of life; and assumes that there is nothing in man's mind which cannot be reduced within the limits of Logic; assumes that man is all intellect. It follows, that everything which interferes with a purely intellectual existence is to be eliminated as dangerous. The pleasures and the pains of the body are to be despised: only the pleasures and the pains of the intellect are worthy to occupy man. By his passions he is made a slave; by his intellect he is free. His senses are passive; his intellect is active. It is his duty therefore to surmount and despise his passions and his senses, that he may be free, active, virtuous.

We have here the doctrine of the Cynics, somewhat purified, but fundamentally the same; we have here also the anticipation of Rome; the forethought of that which was subsequently realised in act. Rome was the fit theatre of Stoicism, because Rome was peopled with soldiers: these soldiers had their contempt of death formed in perpetual campaigns. How little the Romans regarded the life of man their history shows. The gladiatorial combats, brutal

and relentless, must have hardened the minds of all spectators; and there were no softening influences to counteract them. How different the Greeks! They did not pretend to despise this beautiful life; they did not affect to be above humanity. Life was precious, and they treasured it; treasured it not with petty fear, but with noble ingenuousness. They loved life, and wept on quitting it; and they wept without shame. They loved life, and they said so. When the time came for them to risk it, or to give it for their country, or their honour,—when something they prized higher was to be gained by the sacrifice,—then they died unflinchingly. The tears shed by Achilles and Ulysses did not unman them: these heroes fought terribly, as they loved tenderly. Philoctetes, in agony, howls like a wild beast, because he feels pain, and feels no shame in expressing it. But these shrieks have not softened him: he is still the same stern, implacable Philoctetes.

The Stoics, in their dread of becoming effeminate, became marble. They despised pain; they despised death. To be above pain was thought manly. They did not see that, in this respect, instead of being above Humanity, they sank below it. If it is a condition of our human organization to be susceptible of pain, it is only affectation to conceal the expression of that pain. Could silence stifle pain, it were well; but to stifle the cry, is not to stifle the feeling; and to have a feeling, yet affect not to have it, is pitiful. The savage soon learns that Philosophy; the civilized man is superior to it. You receive a blow, and you do not wince? so much of heroism is displayed by a stone. You are face to face with Death, and you have no regrets? then you are unworthy of life. Real heroism feels the pain it conquers, and loves the life it surrenders in a noble cause.

As a reaction against effeminacy, Stoicism may be applauded; as a doctrine, it is one-sided. It ends in apathy and egoism. Apathy, indeed, was considered by the Stoics as the highest condition of Humanity; whereas, in truth, it is the lowest.

CHAPTER IV.

THE NEW ACADEMY.

§ I. ARCESILAUS AND CARNEADES.

THE New Academy would solicit our attention, were it only for the celebrity bestowed on it by Cicero and Horace; but it has other and higher points of interest than those of literary curiosity. The combat of which it was the theatre was, and is, of singular importance. The questions connected with it are those vital questions respecting the origin and certitude of human knowledge, which so long have occupied the ingenuity of thinkers; and the consequences which flow from either solution of the problem are of the utmost importance.

The Stoics endeavoured to establish the certitude of human knowledge, in order that they might establish the truth of moral principles. They attacked the doctrines of the Sceptics, and believed they triumphed by bringing forward their own doctrine of Common-Sense. But the New Academicians had other arguments to offer. They too were Sceptics, although their scepticism differed from that of the Pyrrhonists. The nature of this difference Sextus Empericus has noted. 'Many persons,' says he, 'confound the Philosophy of the Academy with that of the Sceptics. But although the disciples of the New Academy declare that all things are incomprehensible; yet they are distinguished from the Pyrrhonists in this very dogmatism; they affirm that all things are incomprehensible—the Sceptics do not affirm even that. Moreover, the Sceptics consider all perceptions perfectly equal as to the faithfulness of their testimony; the

Academicians distinguish between probable and improbable perceptions: the first they class under various heads. There are some, they say, which are merely probable, others which are also confirmed by reflection, others which are subject to no doubt. Assent is of two kinds: simple assent which the mind yields without repugnance as without desire, such as that of a child following its master; and the assent which follows upon conviction and reflection. The Sceptics admitted the former kind; the Academicians the latter.'

These differences are of no great moment; but in the history of sects we find every variation invested with its degree of importance; and we can understand the pertinacity with which the Academicians distinguished themselves from the Sceptics, even on such slight grounds as the above.

In treating of the Academicians we are forced to follow the plan pursued with the Sceptics, namely to consider the doctrines of the whole sect, rather than to particularize the share of each individual member. The Middle Academy and the New Academy we thus unite in one; although the ancients drew a distinction between them, it is difficult for moderns to do so. Arcesilaus and Carneades, therefore, shall be our types.

Arcesilaus was born at Pitane in the 116th Olympiad (B.C. 316). He was early taught mathematics and rhetoric, became the pupil of Theophrastus, afterwards of Aristotle, and finally of Polemo the Platonist. In this last school he was contemporary with Zeno, and probably there began that antagonism which was so remarkable in their subsequent career. On the death of Crates, Arcesilaus filled the Academic chair, and filled it with great ability and success. His fascinating manners won him general regard. He was learned and sweet-tempered, and generous to a fault. Visiting a sick friend, who, he saw, was suffering from privation, he slipped, unobserved, a purse of gold underneath the sick man's pillow. When the attendant discovered it, the sick man said with a smile, 'This is one of Arcesilaus's generous frauds.'

He was of a somewhat luxurious temper, but he lived till the age of seventy-five, when he killed himself by hard drinking.

Carneades, the most illustrious of the Academicians, was born at Cyrene, in Africa, Ol. 141, 4 (B.C. 213). He was a pupil of Diogenes the Stoic, who taught him the subtleties of disputation. This made him sometimes exclaim in the course of a debate: 'If I have reasoned rightly, you are wrong; if not, O Diogenes, return me the *mina* I paid you for my lessons.' On leaving Diogenes he became the pupil of Hegesinus, who then held the Academic chair; by him he was instructed in the sceptical principles of the Academy, and on his death he succeeded to his chair. He also diligently studied the voluminous writings of Chrysippus. These were of great value to him, exercising his subtlety, and trying the temper of his own metal. He owed so much to this opponent that he used to say, 'Had there not been a Chrysippus, I should not be what I am.' There are two kinds of writers: those who directly instruct us in sound knowledge, and those who indirectly lead us to the truth by the very opposition they raise against their views. Next to exact knowledge, there is nothing so instructive as exact error: an error clearly stated, and presented in somewhat the same way as it at first presented itself to the mind which now upholds it, enables us to see not only that it is an error, but by what illusion it deceived the upholder; it thus becomes fertile in results. It is better than direct instruction: better, because the learner's mind is called into full activity, and apprehends the truth for itself, instead of passively assenting to it.

Carneades was justified in his praise of Chrysippus. He felt how much he owed to his antagonist. He felt that to him he owed a clear conception of the Stoical error, and a clear conviction of the truth of the Academic doctrine; and owed also no inconsiderable portion of that readiness and subtlety which marked him out amongst his countrymen as a fitting Ambassador to be sent to Rome.

Carneades in Rome—Scepticism in the Stoic city—presents an interesting picture. The Romans crowded round him, fascinated by his subtlety and eloquence. Before Galba—before Cato the Censor—he harangued with marvellous unction in praise of Justice; and the hard brow of the grim Stoic softened; an approving smile played over those thin firm lips. But the next day the brilliant orator undertook to exhibit the uncertainty of all human knowledge; and, as a proof, he refuted all the arguments with which the day before he had supported Justice. He spoke against Justice as convincingly as he had spoken for it. The brow of Cato darkened again, and with a keen instinct of the dangers of such ingenuity operating upon the Roman youth, he persuaded the Senate to send back the philosophers to their own country.

Carneades returned to Athens, and there renewed his contest with the Stoics. He taught with great applause, and lived to the advanced age of ninety.

That the Academicians should have gone over to scepticism is not strange: indeed, as we have said, scepticism was the inevitable result of the tendencies of speculation; and the only sect which did not accept it was forced to find a refuge in Common-Sense: that is to say, was forced to find refuge in the abdication of Philosophy, which abdication was in itself a species of scepticism. But it may seem strange that the New Academy should issue from Plato; it may seem strange that Arcesilaus should be a continuer and a warm admirer of Plato. The ancients themselves, according to Sextus Empiricus, were divided amongst each other respecting Plato's real doctrine; some considering him a sceptic, others a dogmatist. We have already explained the cause of this difference of opinion, and have shown how very little consistency and precision there is in the opinions of Plato upon all subjects except Method. Scepticism, therefore, might very easily result from a study of his writings. But this is not all. Plato's attack upon the theories of his predecessors, which were grounded upon sense-knowledge, is

constant, triumphant. The dialogue of the *Theætetus*, which is devoted to the subject of Philosophy, is an exposition of the incapacity of sense to furnish materials for Philosophy. All that sense can furnish the materials for is Opinion, and Opinion, as he frequently declares, even when it is Right Opinion, never can be Philosophy. Plato, in short, destroyed all the old foundations upon which theories had been constructed. He cleared the ground before commencing his own work. By this means he obviated the attacks of the Sophists, and yet refused to sustain the onus of errors which his predecessors had accumulated. The Sophists saw the weakness of the old belief, and attacked it. Having reduced it to ruins, they declared themselves triumphant. Plato appeared, and admitted the fact of the old fortress being in ruins, and its deserving to be so; but he denied that the city of Truth was taken. 'Expend,' said he, 'your wrath and skill in battering down such fortresses; I will assist you; for I too declare them useless. But the real fortress you have not yet approached; it is situate on far higher ground.' Sense-knowledge and Opinion being thus set aside, the stronghold of Philosophy was the Ideal theory: in it Plato found refuge from the Sophists. Aristotle came and destroyed that theory. What then remained? Scepticism.

Arcesilaus admitted, with Plato, the uncertainty of Opinion; but he also admitted, with Aristotle, the incorrectness of the Ideal theory. He was thus reduced to scepticism. The arguments of Plato had quite destroyed the certitude of Opinion; the arguments of Aristotle had quite destroyed the Ideal theory. And thus, by refusing to accept one argument of the Platonic doctrine, Arcesilaus could from Plato's works deduce his own theory of the Incomprehensibility of all things: the *acatalepsy*.

The doctrine of *acatalepsy* recalls to us the Stoical doctrine of *catalepsy* or Apprehension, to which it is the antithesis. The *Cataleptic Phantasm* was the True Perception, according to the Stoics; according to the Academicians all Perceptions were *acataleptic*, *i. e.* bore no conformity to the

objects perceived; or, if they did bear any conformity thereto, it could never be known.

Arcesilaus saw the weak point of the Stoical argument. Zeno pretended that there was a criterion, which decided between Science and Opinion, which decided between true and false perceptions, and this was the assent which the mind gave to the truth of certain perceptions: in other words, Common-Sense was the criterion. 'But,' said Arcesilaus, 'what is the difference between the assent of a wise man, and the assent of a madman?—There is no difference but in name.' He felt that the criterion of the Stoics was itself in need of a criterion.

Chrysippus the Stoic combated Arcesilaus, and was in turn combated by Carneades. The great question then pending was this:—

What Criterion is there of the truth of our knowledge?

The criterion must reside in Reason, in Conception, or in Sensation. It cannot reside in Reason, because Reason itself is not independent of the other two: it operates upon the materials furnished by them, and is dependent upon them. Our knowledge is derived from the senses, and every object presented to the mind must consequently have been originally presented to the senses: on their accuracy the mind must depend.

Reason cannot therefore contain within itself the desired criterion. Nor can Conception; for the same arguments apply to it. Nor can the criterion reside in Sense; because, as all admit, the senses are deceptive, and there is no perception which cannot be false? For what is Perception? Our Senses only inform us of the presence of an object in so far as they are affected by it. But what is this? Is it not *we* who are affected—*we* who are modified? Yes; and this modification reveals both itself and the object which causes it. Like light, which in showing itself, shows also the objects upon which it is thrown; like light also, it shows objects in *its own colours*. Perception is a peculiar modification of the soul. The whole problem now to solve is this:—

Does every modification of the soul exactly correspond with the external object which causes that modification?

This is a problem presented by the Academicians. They answered, but they did not solve it; they left to their adversaries the task of proving the correspondence between the object and subject.

In nowise does the Sensation correspond with the Object; in nowise does the modification correspond with the external cause, except in the relation of cause and effect. The early thinkers were well aware, that in order to attribute any certainty to sensuous knowledge, we must assume that the Senses transmit us copies of things. Democritus, who was the first to see the necessity of such an hypothesis, suggested that our Ideas were *Eidola*, or images of the objects, of an extremely airy texture, which were thrown off by the objects in the shape of effluvia, and entered the brain by the pores. Those who could not admit such an explanation substituted the hypothesis of Impressions. Ask any man, not versed in such inquiries, whether he believes his perceptions to be copies of objects,—whether he believes that the flower he sees before him exists quite independently of him, and of every other human being, and exists with the same attributes of shape, fragrance, taste, &c., his answer is sure to be in the affirmative. He will regard you as a madman if you doubt it. And yet so early as the epoch of which we are now sketching the history, thinking men had learned in some wise to see that our Perceptions were *not* copies of objects, but were simply modifications of our minds, caused by the objects. Once admit this, and sensuous knowledge is for ever pronounced not only uncertain, but necessarily so. Can each modification be a *copy* of the cause which modifies? As well ask, Is the pain, occasioned by a burn, a copy of the fire? Is it at all like the fire? Does it at all express the essence of fire? Not in the least. It only expresses one relation in which we stand to the fire; one effect upon us which fire will produce. Nevertheless fire is an object, and a burn is a sensation. The way in which we perceive the existence of

the object (fire) is similar to that in which we perceive the existence of other objects: and that way is in the modifications they occasion; *i.e.* in the Sensations.

Let us take another instance. We say that we hear thunder: in other words, that we have a perception of the object called thunder. Our sensation really is of a sound, which the electrical phenomena we call thunder have caused in us, by setting the air vibrating and thus acting on the auditory nerve. Is our sensation any copy of the Phenomena? Does it in any degree express the nature of the Phenomena? No; it only expresses the effect produced in us by a certain vibration of the air.

In these cases most people will readily acquiesce; for, by a very natural confusion of ideas, whenever they speak of perceptions they mostly mean visual perceptions; because with sight the clearest knowledge is associated; because also the hypothesis of our perceptions being copies of Things is founded upon sight. The same persons who would willingly admit that pain was not a copy of the fire, nor of anything in the nature of fire, except in its effect on our nerves, would protest that the appearance of fire to the eye was the *real* appearance of the fire, all eyes apart, and quite independent of human vision. Yet if all sentient beings were at once swept from the face of the earth, the fire would have no attribute at all resembling pain; because pain is a modification, not of fire, but of a sentient being. In like manner, if all sentient beings were at once swept from the face of the earth, the fire would have no attributes at all resembling light and colour; because light and colour are modifications of the sentient being, caused by *something* external, but no more resembling its cause than the pain inflicted by an instrument resembles that instrument.

Pain and colour are modifications of the sentient being. The question at issue is, Can a modification of a sentient being be a copy of its cause? We may imagine that when we see an object our sensation is a copy of it, because we believe that the object paints itself upon the retina; and we

liken perception to a mirror, in which things are reflected. It is extremely difficult to divest ourselves of this prejudice; but we may be made aware of the fallacy if we attend to those perceptions which are not visual—to the perceptions of sound, fragrance, taste, or pain. These are clearly nothing but modifications of our sentient being, *caused* by external objects, but in nowise *resembling* them. We are all agreed that the heat is not in the fire, but in us; that sweetness is not in the sugar, but in us; that fragrance is but the particles which, impinging on the olfactory nerve, cause a sensation in us. In all beings similarly constituted these things would have similar effects, would cause pain, sweetness, and fragrance; but on all other beings the effects would be different. Fire would burn paper, but not pain it; sugar would mix with water, but not give it the sensation of sweetness.

The radical error of those who believe that we perceive things *as they are*, consists in mistaking a metaphor for a fact, and believing that a mind is a mirror in which external objects are reflected. But, as Bacon finely says, 'The human understanding is like an *unequal* mirror to the rays of things, which, mixing its own nature with the nature of things, distorts and perverts them.' We attribute heat to the fire, and colour to the flower; heat and colour really being states of our consciousness, occasioned by the fire and the flower under certain conditions.

Perception is nothing more than a state of the percipient; *i.e.* a state of consciousness. This state may be occasioned by some external cause, and may be as complex as the cause is complex, but it is still nothing more than a state of consciousness—an effect produced by an adequate cause. Of every change in our sensation we are conscious, and in time we learn to give definite names and forms to the causes of these changes. But in the fact of Consciousness there is nothing beyond consciousness. In our perceptions we are conscious only of the changes which have taken place within us: we can never transcend the sphere of our own consciousness; we can never go out of ourselves, and become aware of

the objects which caused those changes. All we can do is to identify certain external appearances with certain internal changes, *e.g.* to identify the appearance we name 'fire' with certain sensations we have known to follow our being placed near it. Turn the fact of Consciousness how we will, we can see nothing in it but the change of a sentient being operated by some external cause. Consciousness is no mirror of the world; it gives no faithful reflection of things as they are *per se*; it only gives a faithful report of its own modification as excited by external things.

The world, apart from our consciousness, *i.e.* the non-ego *quâ* non-ego—the world *per se*—is, in all likelihood, something utterly different from the world as we know it; for all we know of it is derived through our consciousness of what its effects are on *us*, and our consciousness is obviously only a state of ourselves, not a copy of external things.

It may be here asked, How do you infer that the world is different from what it appears to us?

The question is pertinent, and may be answered briefly. The world *per se* must be different from what it appears to us through consciousness, because to us it is only known in the relation of cause and effect. World is the cause; our consciousness the effect. But the same cause operating on some other organization would produce a very different effect. If all animals were blind, there would be no such thing as light (*i.e.* light as we know it), because light is a resultant of the operation of some unknown thing on the retina. If all animals were deaf, there would be no such thing as sound, because sound is a resultant of the operation of some unknown thing on the tympanum. If all men were without their present nervous system, there would be no such thing as pain, because pain is a resultant of the operation of some external thing on the specialized nervous system.

Light, colour, sound, taste, smell, are all states of consciousness; what they are beyond consciousness, as existences *per se*, we cannot know, we cannot imagine, because we can only conceive them *as* we know them. Light, with

its myriad forms and colours—Sound, with its thousand-fold life—make Nature what Nature appears to us. But they do not exist *as such* apart from our consciousness; they are the investitures with which we clothe the world. Nature in her insentient solitude is an eternal darkness—an eternal silence.

We conclude, therefore, that the world *per se* in nowise resembles the world as it appears to us. Perception is an effect; and its truth is not the truth of *resemblance*, but of *relation*, *i.e.* it is the true operation of the world on us, the true operation of cause and effect. But perception is not the true resemblance of the world: consciousness is no mirror reflecting external things.

Let us substitute for the metaphor of a mirror the more abstract expression: 'Perception is the effect of an external object acting on a sentient being,' and much of the confusion darkening this matter will be dissipated. An effect, we know, agrees with its cause, but it does not necessarily resemble it. An effect is no more a copy of the cause than pain is a copy of the application of fire to a finger: *ergo*, Perception can never be an accurate report of what things are *per se*, but only of what they are in relation to us.

It has been said that, although no single sense does actually convey to us a correct impression of anything, nevertheless we are enabled to confirm or modify the report of one sense by the report of another sense, and that the result of the whole activity of the five senses is a true impression of the external object. This curious fallacy pretends that a number of false impressions are sufficient to constitute a true one.

The conclusion to be drawn from the foregoing is this: There is no correspondence between the object and the sensation, except that of cause and effect. Sensations are not copies of objects; do not at all resemble them. As we can only know objects through sensation—*i.e.* as we can only know our sensations—we can never ascertain the truth respecting objects.

This brings us back to the New Academy, the disciples of which strenuously maintained that Perception, being nothing but a modification of the Soul, could never reveal the real nature of things.

Do we then side with the Academicians in proclaiming all human knowledge deceptive? No: to them, as to the Pyrrhonists, we answer: You are quite right in affirming that man cannot transcend the sphere of his own consciousness, cannot penetrate the real essences of things, cannot know causes, can only know phenomena. But this affirmation—though it crushes Metaphysics—though it interdicts the inquiry into *noumena*, into essences and causes, as frivolous because futile—does not touch Science. If all our knowledge is but a knowledge of phenomena, there can still be a Science of Phenomena adequate to all man's true wants. If Sensation is but the effect of an External Cause, we, who can never know that cause, know it in its relation to us, *i.e.* in its effects. These effects are as constant as their causes; and, consequently, there can be a Science of effects, the aim of which is to trace the Co-existences and Successions of Phenomena, *i.e.* to trace the relation of Cause and Effect throughout the universe submitted to our inspection.

But neither the Pyrrhonists nor the Academicians saw this refuge for the mind; they consequently proclaimed Scepticism as the final result of inquiry.

CHAPTER V.

SUMMARY OF THE EIGHTH EPOCH.

WE have now brought our narrative to the second crisis in the history of speculation. The Scepticism which made the Sophists powerful, and which closed the first period of this history, we now behold once more usurping the intellects of men, and this time with far greater power. A Socrates appeared to refute the Sophists. Who is there to refute and discredit the Sceptics?

The Sceptics, and all thinkers during the epoch we have just treated were such, whether they called themselves Epicureans, Stoics, Pyrrhonists, or New Academicians,—the Sceptics, we say, were in possession of the most formidable arms. From Socrates, from Plato, and from Aristotle, they had borrowed their best weapons, and with these had attacked Philosophy, and attacked it with success.

All the wisdom of the antique world was powerless against the Sceptics. Speculative belief was reduced to the most uncertain 'probability.' Faith in philosophic Truth was extinct. Faith in human endeavour that way was gone. Philosophy was rejected as impossible.

But there was one peculiarity of the Socratic doctrine which was preserved even in the midst of scepticism. Socrates had made Ethics the great object of his inquiries: and all subsequent thinkers had given it a degree of attention which before was unknown. Philosophy contented itself with the Common-Sense doctrine of the Stoics, and the Probabilities of the Sceptics, which, however futile as philosophic principles, were efficacious enough as moral principles. Common-

Sense may be a bad basis for metaphysical or scientific reasoning; but it is not so bad a basis for a system of morals.

The protest, therefore, which Scepticism made against all Philosophy was not so anarchical in its tendency as the protest made by the Sophists; but it was more energetic, more terrible. In the wisdom of that age there lay no cure for it. The last cry of despair seemed to have been wrung from the baffled thinkers, as they declared their predecessors to have been hopelessly wrong, and declared also that their error was without a remedy.

It was, indeed, a saddening contemplation. The hopes and aspirations of so many incomparable minds thus irrevocably doomed; the struggles of so many men, from Thales, who first asked himself, Whence do all things proceed? to the elaborate systematization of the forms of thought which occupied an Aristotle—the struggles of all these men had ended in Scepticism. Little was to be gleaned from the harvest of their endeavours but arguments against the possibility of that Philosophy they were so anxious to form. Centuries of thought had not advanced the mind one step nearer to a solution of the problems with which, child-like, it began. It began with a child-like question; it ended with an aged doubt. Not only did it doubt the solutions of the great problem which others had attempted; it even doubted the possibility of any solution. It was not the doubt which begins, but the doubt which ends inquiry: it had no illusions.

This was the second crisis of Greek Philosophy. Reason thus assailed could only find a refuge in Faith; and the next period opens with the attempt to construct a Religious Philosophy.

NINTH EPOCH.

Reason allies itself with Faith, and Philosophy renounces its independence, becoming once more an instrument of Theology—The Alexandrian School.

CHAPTER I.

RISE OF NEO-PLATONISM.

§ I. ALEXANDRIA.

PHILOSOPHY no longer found a home in Greece; it had no longer worshippers in its native country, and was forced to seek them elsewhere. A period had arrived when all problems seemed to have been stated, and none seemed likely to be solved. Every system which human ingenuity could devise had been devised by the early thinkers; and not one had been able to withstand examination. In the early annals of speculation, a new and decisive advance is made whenever a new question is asked; to suggest a doubt, is to exercise ingenuity; to ask a question, is to awaken men to a new view of the subject. But now all questions had been asked; old questions had been revived under new forms; nothing remained to stimulate inquiry, nothing to give speculators a hope of success.

Unable to ask new questions, or to offer new answers to those already asked, the philosophers readily seized on the only means which enabled them to gain renown: they travelled. They carried their doctrines into Egypt and to Rome; and in those places they were listened to with wonder

and delight. Their old doctrines were novelties to a people who had no doctrines of its own; and, from the excessive cost of books in those days, almost all instruction being oral, the strangers were welcomed warmly, and the doctrines imported were as novel as if they had been just invented.

Philosophy, exiled from Greece, was a favoured guest in Alexandria and Rome: but in both cases it was a stranger, and could not be naturalized. In Alexandria, however, it made a brilliant display; and the men it produced gave it an originality and an influence which it never possessed in Rome.

Roman Philosophy was but a weak paraphrase of the Grecian. To speak Greek, to write Greek, became the fashionable ambition of Rome. The child was instructed by a Greek slave. Greek professors taught Philosophy and Rhetoric to aspiring youths. Athens had become the necessary 'tour' which was to complete a man's education. It was there that Cicero learned those ideas which he delighted in setting forth in charming dialogues. It was there Horace learned that light and careless philosophy, which shines through the sparkling crystal of his verse. Wandering from the Academy to the Porch, and from the Porch to the Garden, he became imbued with a scepticism which checked his poetical enthusiasm; he learned to make a system of that pensive epicureanism which gives so peculiar a character to his poems.

In Rome, Philosophy might tinge the poetry, give weight to oratory, method to jurisprudence, and supply some topics of conversation; but it was no Belief filling the minds of serious men: it took no root in the national existence; it produced no great thinkers.

In Alexandria the case was different. There several schools were formed, and some new elements introduced into the doctrines then existent. Great thinkers—Plotinus, Proclus, Porphyry—made it illustrious; and it had a rival, whose antagonism alone would confer immortal renown upon it: that rival was Christianity.

In no species of grandeur was the Alexandrian School deficient, as M. Saisset observes: * genius, power, and duration, have consecrated it. Re-animating, during an epoch of decline, the fecundity of an aged civilization, it created a whole family of illustrious names. Plotinus, its real founder, resuscitated Plato; Proclus gave the world another Aristotle; and, in the person of Julian the Apostate, it became master of the world. For three centuries it was a formidable rival to the greatest power that ever appeared on earth—the power of Christianity; and, if it succumbed in the struggle, it only fell with the civilization of which it had been the last rampart.

Alexandria, the centre of gigantic commerce, soon became a new metropolis of science, rivalling Athens. The Alexandrian Library is too celebrated to need more than a passing allusion: to it, and to the men assembled there, we owe the vast labours of erudition in philosophy and literature which were of such service to the world.

Beside the Museum of Alexandria there rose into formidable importance the Didascalia of the Christians. In the same city, Philo the Jew, and Cenesidemus the Pyrrhonist, founded their respective schools. Ammonius Saccas appears there. Lucian passes through at the same time that Clemens Alexandrinus is teaching. After Plotinus has taught, Arius and Athanasius will also teach. Greek Scepticism, Judaism, Platonism, Christianity—all have their interpreters within so small a distance from the temple of Serapis.

§ II. PHILO.

Alexandria, as we have seen, was the theatre of various struggles: of these we are to select one, and that one the struggle of the Neo-Platonists with the Christian Fathers.

Under the name of the Alexandrian School are designated, loosely enough, all those thinkers who endeavoured to find

* *Revue des Deux Mondes*, 1844, tome iii. p. 783.

a refuge from Scepticism in a new Philosophy, based on altogether new principles. Now, although these various thinkers by no means constitute a School, they constitute a Movement, and they form an Epoch in the history of Philosophy. We may merely observe that the 'Alexandrian School' and the 'Neo-Platonists' are not convertible terms: the former designates a whole movement, the latter designates the most illustrious section of that movement.

Philo the Jew is the first of these Neo-Platonists. He was born at Alexandria, a few years before Christ. The influence of Greek ideas had long been felt in Alexandria, and Philo, commenting on the writings of the Jews, did so in the spirit of one deeply imbued with Greek thought. His genius was Oriental, his education Greek; the result was a strange mixture of mysticism and dialectics.* To Plato he owed much: but to the New Academy, perhaps more. From Carneades he learned to distrust the truth of all sensuous knowledge, and to deny that Reason had any criterion of truth.

Thus far he was willing to travel with the Greeks; thus far had dialectics conducted him. But there was another element in his mind beside the Greek: there was the Oriental or mystical element. If human knowledge is a delusion, we must seek for truth in some higher sphere. The Senses may deceive; Reason may be powerless; but there is still a faculty in man—there is Faith. Real Science is the gift of God: its name is Faith: its origin is the goodness of God: its cause is Piety.

This conception is not Plato's, yet is nevertheless Platonic. Plato would never have thus condemned Reason for the sake of Faith; and yet he, too, thought that the nature of God could not be known, although his existence could be proved. In this he would have agreed with Philo. But, although Plato does not speak of Science as the gift of God,

* St. Paul thus comprehensively expresses the national characteristic of the Jews and Greeks: 'The Jews require a sign (*i.e.* a miracle), and the Greeks seek after wisdom (*i.e.* philosophy).'*—1 Corinth. i. 22.*

he does in one place so speak of Virtue; and he devotes the whole dialogue of the *Meno* to show that Virtue cannot be taught, because it is not a thing of the understanding, but a gift of God. The reasons he there employs may easily have suggested to Philo their application to Philosophy.

From this point Philo's Philosophy of course becomes a Theology. God is ineffable, incomprehensible: his existence may be known; his nature can never be known: *ὁ δ' ἄρα οὐδὲ τῷ νῷ καταληπτός, ὅτι μὴ κατὰ τὸ εἶναι μόνον.* But to know that he exists is in itself the knowledge of his being one, perfect, simple, immutable, and *without attribute*. This knowledge is implied in the simple knowledge of his existence: he cannot be otherwise, if he exist at all. But to know this, is not to know in what consists his perfection. We cannot penetrate with our glance the mystery of his essence. We can only believe.

If however we cannot know God in his essence, we can obtain some knowledge of his Divinity: we know it in *The Word*. This *λόγος*—this *Word* (using the expression in its Scriptural sense)—fills a curious place in all the mystical systems. God being incomprehensible, inaccessible, an intermediate existence was necessary as an interpreter between God and Man, and this intermediate existence the Mystics called *The Word*.

The Word, according to Philo, is God's Thought. This Thought is twofold: it is *λόγος ἐνδιάθετος*, the Thought as embracing all Ideas (in the Platonic sense of the term *Idea*), *i.e.* Thought as Thought; and it is *λόγος προφορικός*, the Thought realized: Thought become the World.

In these three *hypostases* of the Deity we see the Trinity of Plotinus foreshadowed. There is, first, God the Father; secondly, the Son of God, *i.e.* the *λόγος*; thirdly, the Son of the *λόγος*, *i.e.* the World.

This brief outline of Philo's Theology will sufficiently exemplify the two great facts which we are anxious to have understood:—1st, the union of Platonism with Oriental mysticism; 2ndly, the entirely new direction given to

Philosophy, by uniting it once more with Religion. It is this direction which characterizes the Movement of the Alexandrian School. Reason had been shown to be utterly powerless to solve the great questions of Philosophy then agitated. Various Schools had pursued various Methods, but all with one result. Scepticism was the conclusion of every struggle. 'And yet,' said the Mystics, 'we have an idea of God and of his goodness; we have an ineradicable belief in his existence, and in the Perfection of his nature, consequently, in the beneficence of his aims. Yet these ideas are not innate; were they innate, they would be uniformly entertained by all men, and amongst all nations. If they are not innate, whence are they derived? Not from Reason; not from experience; then from Faith.'

Now, Philosophy, conceive it how you will, is entirely the offspring of Reason: it is the endeavour to explain by Reason the mysteries amidst which we 'move, live, and have our being.' Although it is legitimate to say, 'Reason is incapable of solving the problems proposed to it,' it is not legitimate to add, 'therefore we must call in the aid of Faith.' In Philosophy, Reason must either reign alone, or abdicate. No compromise is permissible. If there are things between heaven and earth which are not dreamt of in our Philosophy—which do not come within the possible sphere of our Philosophy—we may believe in them, indeed, but we cannot christen that belief philosophical.

One of two things,—either Reason is capable of solving the problems, or it is incapable: in the one case its attempt is philosophical; in the second case its attempt is futile. Any attempt to mix up Faith with Reason, in a matter exclusively addressed to the Reason, must be abortive. We do not say that what Faith implicitly accepts, Reason may not explicitly justify; but we say, that to bring Faith to the aid of Reason, is altogether to destroy the philosophical character of an inquiry. Reason may justify Faith; but Faith must not furnish conclusions *for* Philosophy. Directly Reason is abandoned, Philosophy ceases; and every explana-

tion then offered is a theological explanation, and must be put to altogether different tests from what a philosophical explanation would require.

Speculation was originally theological; but in process of time Reason timidly ventured upon what are called 'natural explanations;' and from the moment that it felt itself strong enough to be independent, Philosophy was established. In the early speculations of the Ionians we saw the pure efforts of Reason to explain mysteries. As Philosophy advanced, it became more and more evident that the problems attacked by the early thinkers were, in truth, so far from being nearer a solution, that their extreme difficulty was only just becoming appreciated. The difficulty became more and more apparent, till at last it was pronounced insuperable: Reason was declared incompetent. Then the Faith which had so long been set aside was again called to assist the inquirer. In other words, Philosophy, discovering itself to be powerless, resigned in favour of Theology.

When therefore we say that the direction given to the human mind by the Alexandrian School, in conjunction with Christianity—the only two spiritual movements which materially influenced the epoch we are speaking of—was a theological direction, the reader will at once see its immense importance, and will be prepared to follow us in our exposition of the mystical doctrines of Plotinus.

CHAPTER II.

ANTAGONISM OF CHRISTIANITY AND NEO-PLATONISM.

§ I. PLOTINUS.

WHILE Christianity was making rapid and enduring progress in spite of every obstacle; while the Apostles wandered from city to city, sometimes honoured as Evangelists, at other times insulted and stoned as enemies, the Neo-Platonists were developing the germ deposited by Philo, and not only constructing a theology, but endeavouring on that theology to found a Church. Whilst a new religion, Christianity, was daily usurping the souls of men, these philosophers fondly imagined that an old religion could effectually oppose it.

Christianity triumphed without much difficulty. Looking at it in a purely moral view, its superiority is at once apparent. The Alexandrians exaggerated the vicious tendency of which we have already seen the fruits in the Cynics and Stoics,—the tendency to despise Humanity. Plotinus blushed because he had a body: contempt of human personality could go no further. What was offered in exchange? The ecstatic perception; the absorption of personality in that of the Deity—a Deity inaccessible to knowledge as to love—a Deity which the soul can only attain by a complete annihilation of its personality.

The attempt of the Neo-Platonists failed, as it deserved to fail; but it had great talents in its service, and it made great noise in the world. It had three periods. The first of these, the least brilliant but the most fruitful, is that of Ammonius Saccas and Plotinus. A porter of Alexandria

becomes the chief of a School, and men of genius listen to him; amongst his disciples are Plotinus, Origen, and Longinus. This School is perfected in obscurity, and receives at last a solid basis by the development of a metaphysical system. Plotinus, the author of this system, shortly after lectures at Rome with amazing success. It is then that the Alexandrian School enters upon its second period. With Porphyry and Iamblicus it becomes a sort of Church, and disputes with Christianity the empire of the world. Christianity had ascended the throne in the person of Constantine; Neo-Platonism dethrones it, and usurps its place in the person of Julian the Apostate. But now mark the difference. In losing Constantine, Christianity lost nothing of its real power; for its power lay in the might of convictions, and not in the support of potentates; its power was a spiritual power, ever active, ever fruitful. In losing Julian, Neo-Platonism lost its power, political and religious. The third period commences with that loss: and the genius of Proclus bestows on it one last gleam of splendour. In vain did he strive to revive the scientific spirit of Platonism, as Plotinus had endeavoured to revive the religious spirit of Paganism: his efforts were vigorous, but sterile. Under Justinian the School of Alexandria became extinct.

Such is the outward history of the School: let us now cast a glance at the doctrines which were there elaborated. In the writings of thinkers professedly eclectic, such as were the Alexandrians, it is obvious that the greater portion will be repetitions and reproductions of former thinkers; and the historian will therefore neglect such opinions to confine himself to those which constitute the originality of the School. The originality of the Alexandrians consists in having employed the Platonic Dialectics as a guide to Mysticism and Pantheism; in having connected the doctrine of the East with the dialectics of the Greeks; in having made Reason the justification of Faith.

There are three essential points to be here examined: their Dialectics, their theory of the Trinity, and their

principle of Emanation. By their Dialectics they were Platonists; by their theory of the Trinity they were Mystics; by their principle of Emanation they were Pantheists.

§ II. THE ALEXANDRIAN DIALECTICS.

The nature of the Platonic Dialectics we hope to have already rendered intelligible; so that in saying Plotinus employed them we are saved from much needless repetition. But although Dialectics formed the basis of Alexandrian philosophy, they did not, as with Plato, furnish the grounds of *belief*. As far as human philosophy went, Dialectics were efficient; but there were problems which did not come within the sphere of human philosophy, and for these another Method was requisite.

Plotinus agreed with Plato that there could only be a science of Universals. Every individual thing was but a phenomenon, passing quickly away, and having no real existence; it could not therefore be the object of philosophy. But these universals—these Ideas which are the only real existences—are they not also subordinate to some higher Existence? Phenomena were subordinate to Noumena; but Noumena themselves were subordinate to the One Noumenon. In other words, the Sensible World was but the Appearance of the Ideal World, and the Ideal World in its turn was but the mode of God's existence.

The question then arose: How do we know anything of God? The Sensible World we perceive through our senses; the Ideal World we gain glimpses of through the reminiscence which the Sensible World awakens in us; but how are we to take the last step—how are we to know the Deity?

I am a finite being; but how can I comprehend the Infinite? As soon as I comprehend the Infinite, I am infinite myself: that is to say, I am no longer myself, no longer that finite being, having a consciousness of his own separate existence.* If, therefore, I attain to a knowledge of

* *Τίς ἂν οὖν τὴν δύναμιν αὐτοῦ ἔλοι δμοῦ πᾶσαν; εἰ γὰρ δμοῦ πᾶσαν, τί ἂν τις αὐτοῦ διαφέρει;*—PLOTINUS, *Enn.* v. lib. 5. c. 10.

the Infinite, it is not by my Reason, which is finite and embraces only finite objects, but by some higher faculty, a faculty altogether impersonal, which identifies itself with its object.

'The identity of Subject and Object—of the thought with the thing thought of—is the only possible ground of knowledge.' This position, which some of our readers will recognize as a fundamental position of modern German speculation, is so removed from all ordinary conceptions, that we must digress awhile in order to explain it.

Knowledge and Being are identical; to know more is to be more. This is not, of course, maintaining the absurd proposition that to know a horse is to be a horse: all we know of that horse is only what we know of the changes in ourselves occasioned by some external cause; and identifying our internal change with that external cause, we call it a horse. Here knowledge and being are identical. We really know nothing of the external cause (horse), we only know our own state of being; and to say, therefore, that 'in our knowledge of the horse we are the horse,' is only saying, in unusual language, that our knowledge is a state of our being, and nothing more. The discussion respecting perception, at page 367, showed that knowledge is only a state of our own consciousness, excited by some unknown cause. The cause *must* remain unknown, because knowledge is effect, not cause.

An apple is presented to you; you see it, feel it, taste it, smell it, and are said to know it. What is this knowledge? Simply a consciousness of the various ways in which the apple affects you. Are you blind and cannot see it? there is one quality less which it possesses, *i.e.* one mode less in which it is possible for you to be affected. Are you without the senses of smell and taste? there are two other deficiencies in your knowledge of the apple. So that, by taking away your senses, we take away from the apple each of its qualities: in other words, we take away the means of your being affected. Your knowledge of the apple is reduced to

nothing. In a similar way, by endowing you with more senses we increase the qualities of the apple; we increase your knowledge by enlarging your being. Thus are Knowledge and Being identical; knowledge is a state of Being as knowing.

'If,' said Plotinus, 'knowledge is the same as the thing known, the Finite, as Finite, never can know the Infinite, because it cannot *be* the Infinite. To attempt, therefore, to know the Infinite by Reason is futile, it can only be known in immediate presence, *παρουσία*. The faculty by which the mind divests itself of its personality is Ecstasy. In this Ecstasy the soul becomes loosened from its material prison, separated from individual consciousness, and becomes absorbed in the Infinite Intelligence from which it emanated. In this Ecstasy it contemplates real existence; it identifies itself with that which it contemplates.'

The enthusiasm upon which this Ecstasy is founded is not a faculty which we constantly possess, such as Reason or Perception: it is only a transitory state, at least so long as our personal existence in this world continues. It is a flash of rapturous light, in which reminiscence is changed into intuition, because in that moment the captive soul is given back to its parent, its God. The bonds which attach the soul to the body are mortal; and God, our father, pitying us, has made those bonds, from which we suffer, fragile and delicate, and in his goodness he gives us certain intervals of respite: *Ζεὺς δὲ πατὴρ ἐλέησας πονοῦμένας, θνητὰ αὐτῶν τὰ δεσμὰ ποιῶν περὶ ἃ πονοῦνται, δίδωσιν ἀναπαύλας ἐν χρόνοις.*

The Oriental and mystical character of this conception is worth remarking; at the same time there is a Platonic element in it, which may be noticed. Plato, in the *Ion*, speaks of a chain of inspiration, which descends from Apollo to poets, who transmit the inspiration to the rhapsodists; the last links of the chain are the souls of lovers and philosophers, who, unable to transmit the divine gift, are nevertheless agitated by it. The Alexandrians also admit the divine inspiration: not that inspiration which only warms and

exalts the heart, but that inspiration revealing the Truth which Reason can neither discern nor comprehend. Whether, in ascending through the various sciences and laboriously mounting all the degrees of Dialectics, we finally arrive at the summit, and tear away the veil behind which the Deity is hidden; or, instead of thus slowly mounting, we arrive at the summit by a sudden spring, by the force of virtue or by the force of love, the origin of this revelation is the same: the Poet, the Prophet, and the Philosopher only differ in the point of departure each takes. Dialectics, therefore, though a valuable method, is not an infallible one for arriving at Ecstasy. Everything which purifies the soul and makes it resemble its primal simplicity, is capable of conducting it to Ecstasy. Besides, there are radical differences in men's natures. Some souls are ravished with Beauty; and these belong to the Muses. Others are ravished with Unity and Proportion; and these are Philosophers. Others are more struck with Moral perfections; and these are the pious and ardent souls who live only in religion.

Thus, then, the passage from simple Sensation, or from Reminiscence, to Ecstasy, may be accomplished in three ways. By Music (in the ancient and comprehensive sense of the term), by Dialectics, and by Love or Prayer. The result is always the same—the victory of the Universal over the Individual.

Such is the answer given by the Alexandrians to that world-old question, How do we know God? The Reason of man is incompetent to such knowledge, because Reason is finite, and the finite cannot embrace the infinite. But, inasmuch as man has a knowledge of the Deity, he must have obtained it in some way: the question is, In what way? This question, which the Christian Fathers answered by referring to Revelation, the Alexandrians could only answer by declaring Ecstasy to be the medium of communication, because in Ecstasy the soul lost its personality and became absorbed in the infinite Intelligence.

We may read in this an instructive lesson respecting the

vicious circle in which all such reasonings are condemned to move :—

‘The one poor finite being in the abyss
Of infinite being twinkling restlessly’—

this finite being strives to comprehend that which includes it, and in the impossible attempt exerts its confident ingenuity.

Asserting that the finite *as* finite cannot comprehend the infinite, the Alexandrian hypothesis is at least consistent in making the finite become, for an instant, infinite. The grounds however upon which this hypothesis is framed are curious. The axiom is this :—The finite *cannot* comprehend the infinite. The problem is this :—How *can* the finite comprehend the infinite? And the solution is :—The finite must *become* the infinite.

Absurd as this is, it is the conclusion deduced by a vigorous intellect from premisses which seemed indisputable. It is only one of the absurdities inseparable from the attempted solution of an insoluble problem.

§ III. THE ALEXANDRIAN TRINITY.

We have said that the philosophy of the Alexandrians was a theology; their theology may be said to be concentrated in the doctrine of the Trinity. Nearly allied to the mystery of the Incarnation, which was inseparable from the mystery of Redemption, the dogma of the Holy Trinity was, as M. Saisset remarks, the basis of all the Christian metaphysics. The greater part of the important heresies, Arianism, Sabellianism, Nestorianism, &c., resulted from differences respecting some portion of this doctrine. It becomes, therefore, a matter of high historical interest to determine its parentage. Some maintain that the Trinity of the Christians was but an imitation of that of the Alexandrians; others accuse the Alexandrians of being the imitators. The dispute has been angrily conducted on both sides.*

* Such of our readers as may desire a compendious statement of the question are referred to M. JULES SIMON, *Histoire de l'École d'Alexandrie*, vol. i. pp. 308–341,

The Alexandrian Trinity is as follows :—God is triple, and, at the same time, one. His nature contains within it three distinct *Hypostases* (Substances, *i.e.* Persons), and these three make one Being. The first is the Unity: not The One Being, not Being at all, but simple Unity. The second is the Intelligence, which is identical with Being. The third is the Universal Soul, cause of all activity and life.

Such is the formula. Let us now see how their Dialectics conducted them to it. On looking abroad upon the world, and observing its constant transformations, what is the first thing that presents itself to our minds as the cause of all these changes? It is life. The whole world is alive; and, not only alive, but seemingly participating in a life similar to our own. On looking deeper, we discover that life itself is but an effect of some higher cause; and this cause must be the ‘Universal’ which we are seeking to discover. Analogy suggests that it is Activity—Motion. But with this Motion we cannot proceed far. It soon becomes apparent to us that the myriad on-goings of nature are not merely activities, but *intelligent* activities. No hazard rules this world. Intelligence is everywhere visible. The cause, then, we have been seeking is at last discovered: it is an Intelligent Activity. Now, what is this, but that mysterious force residing within us, directing us, impelling us? What is this Intelligent Activity but a soul? The soul which impels and directs us is an image of the Soul which impels and directs the world. God, therefore, is the eternal Soul, the $\psi\upsilon\chi\eta$. We have here the first Hypostasis of the Alexandrians.

On a deeper inspection this notion turns out less satisfactory. The dialectician, whose whole art consists in dividing and subdividing, in order to arrive at pure unity—who is always unravelling the perplexed web of speculation, to lay bare at last the unmixed One which had become enveloped in the Many—the dialectician, bred up in the Schools of Plato and Aristotle, could not rest satisfied with so complex

and to the article by M. SAISSET, in the *Revue des Deux Mondes*, before referred to.

an entity as an Intelligent Activity. There are at least two ideas here, and two ideas entirely distinct in nature, viz. Intelligence and Motion. Now, although these might be united in some idea common to both yet superior to both, neither of them could be considered as the last term in an analysis. The Intelligence, when analyzed, is itself the activity of some intelligent being, of Mind, λόγος.

God, therefore, is Mind, absolute, eternal, immutable. We have here the second Hypostasis. Superior to the Divine Soul, ψυχὴ τοῦ παντός, which is the cause of all activity, and king of the sensible world, χορηγὸς τῆς κινήσεως, βασιλεὺς τῶν γυγνομένων, we find the Divine Mind, νοῦς, the magnificence of which we may faintly conceive by reflecting on the splendours of the sensible world, with the Gods, Men, Animals, and Plants, which adorn it: splendours which are but imperfect images of the incomparable lustre of eternal truth. The Divine Mind embraces all the intelligible Ideas which are without imperfection, without movement. This is the Age of Gold, of which God is the Saturn. For Saturn, of whom the Poets have so grandly sung, is the Divine Intelligence; that perfect world which they have described, when

‘Ver erat æternum: placidique tepentibus auris
Mulcebant Zephyri natos sine semine flores.
Mox etiam fruges tellus inarata ferebat;
Nec renovatus ager gravidis caneat aristis.
Flumina jam lactis, jam flumina nectaris ibant;
Flavaque de viridi stillabant ilice mella.’*

That golden age is the Intelligible World, the eternal thought of eternal Intelligence.

A word on this Alexandrian νοῦς. It is Thought abstracted from all thinking; it does not reason: for to reason is to acquire a knowledge of something; he who reasons, arrives at a consequence from his premisses, which he did not see in

* ‘The flowers unsown in fields and meadows reigned;
And western winds immortal spring maintained.
In following years the bearded corn ensued
From earth unasked; nor was that earth renewed.
From veins of valleys milk and nectar broke,
And honey sweating from the pores of oak.’—DRYDEN’S *Ovid*.

those premisses without effort. But God sees the consequence simultaneously with the premisses. His knowledge resembles our knowledge as hieroglyphic writing resembles our written language: that which we discursively develope, he embraces at once.

This νοῦς is at the same time the eternal existence, since all Ideas are united in it. It is the νόησις νοήσεως νόησις of Aristotle,—or, to use the language of Plotinus, the Sight Seeing, the identity of the act of seeing with the object seen: ἔστι γὰρ ἡ νόησις ὁρασις ὁρώσα, ἄμφω τὸ ἓν,—a conception which will at once be understood by recurring to our illustration of the identity of Knowledge and Being.

One would fancy that this was a degree of abstraction to satisfy the most ardent dialectician; to have analyzed thus far, and to have arrived at pure Thought and pure Existence—the Thought apart from Thinking and the Existence apart from its modes—would seem the very limit of human ingenuity, the last abstraction possible. But no: the dialectician is not yet contented: he sees another degree of abstraction still higher, still simpler: he calls it Unity. God, as Existence and Thought, is God as conceived by human intelligence: but, although human intelligence is unable to embrace any higher notion of God, yet is there in human intelligence a hint of its own weakness and an assurance of God’s being something ineffable, incomprehensible. God is not, *en dernière analyse*, Existence and Thought. What is Thought? What is its type? The type is evidently human reason. What does an examination of human reason reveal? This:—To think is to be aware of some object from which the thinker distinguishes himself. To think is to have a self-consciousness, to distinguish one’s personality from that of all other objects, to determine the relation of self to not-self. But nothing is external to God: in him there can be no distinction, no determination, no relation. Therefore God, in his highest hypostasis, cannot think, cannot be thought, but must be something superior to thought. Hence, the necessity for a third hypostasis, which,

third in the order of discovery, is first in the order of being: it is Unity,—τὸ ἐν ἁπλοῦν.

The Unity is not Existence, neither is it Intelligence—it is superior to both: it is superior to all action, to all determination, to all knowledge; for, in the same way as the *multiple* is contained in the *simple*, the many in the one, in the same way is the simple contained in the unity; and it is impossible to discover the truth of things until we have arrived at this absolute unity; for, how can we conceive any existing thing except by unity? What is an individual, an animal, a plant, but that unity which presides over multiplicity? What even is multiplicity—an army, an assembly, a flock—when not brought under unity? Unity is omnipresent; it is the bond which unites even the most complex things. The Unity which is absolute, immutable, infinite, and self-sufficing is not the numerical unit, not the indivisible point. It is the absolute universal *One* in its perfect simplicity. It is the highest degree of perfection—the ideal Beauty, the supreme Good, πρῶτον ἀγαθόν.

God therefore in his absolute state—in his first and highest hypostasis—is neither Existence nor Thought, neither moved nor mutable: he is the simple Unity, or, as Hegel would say, the Absolute Nothing, the Immanent Negative.

Our readers will perhaps scarcely be patient under this inflection of dialectical subtlety; but we beg them to remember that the absurdities of genius are often more instructive than the discoveries of common men, and the subtleties and extravagances of the Alexandrians are fraught with lessons. If rigorous logic conducted eminent minds to conceptions which appear extravagant and sterile, they may induce in us a wholesome suspicion of the efficacy of that logic to solve the problems it is occupied with. Nor is the lesson inapplicable to our own age. German metaphysicians resemble Plotinus more than Plato or Aristotle: nor is the reason difficult of discovery. Plotinus, coming after all the great thinkers had asked almost every metaphysical question and given almost every possible answer, was condemned either to scepticism,

or to accept any consequences of his dialectics, however extreme. Philosophy was in this dilemma: either to abdicate, or to be magnificently tyrannical: it chose to be the latter. Plotinus therefore shrank from no extravagances: where Reason failed, there he called upon Faith. The Germans who saw the establishment of Positive Science, on the one hand, and the destructive results of Kant's *Critique* on the other, found Philosophy in a similar dilemma: compelled either to declare itself incapable, or to proclaim its despotism and infallibility.

The Hegelian faith in dialectics may be contrasted with the Alexandrian faith in Ecstasy. Both proceed with peaceable dogmatism to explain that God is this, or that; to explain how the Nothing *becomes* the existing world; to explain many other inexplicable things; and, if you stop them with the simple inquiry, How do you know this? what is your ground of certitude? they smile, allude blandly to *Vernunft*, and continue their exposition.

Plotinus, indeed, said, that although Dialectics raise us to some conviction of the existence of God, we cannot speak of his nature otherwise than negatively: ἐν ἀφαιρέσει πάντα τὰ περὶ τοῦτον λεγόμενα. We are forced to admit his existence, though it is not correct to speak even of his existence. To say that he is superior to Existence and Thought is not to define him; it is only to distinguish him from what he is not. What he is we cannot know; it would be ridiculous to endeavour to comprehend him. This difference apart, there is remarkable similarity in the speculations of the Alexandrians and the Hegelians: a similarity which all will detect who are capable of detecting identity of thought under diversity of language.

To return to the Alexandrian Trinity, we see in it the Perfect Principle, the One, τὸ ἐν ἁπλοῦν, which generates but is ungenerated; the Principle generated by the Perfect is of all generated things the most perfect: it is therefore Intelligence: νοῦς. In the same way as Intelligence is the *Word* (λόγος) of the One and the manifestation of its power,

so also the Soul is the Word and manifestation of the Intelligence, *ὅλον καὶ ἡ ψυχὴ λόγος νοῦ*. The three hypostases of the Deity are therefore, 1st, the Perfect, the Absolute Unity, *τὸ ἐν ἁπλοῦν*; 2nd, the First Intelligence, *τὸ νοῦν πρῶτως*; 3rd, the Soul of the world.

This Trinity is very similar to the threefold nature of God in Spinoza's system. Spinoza says, that God is the infinite Existence, having two infinite Attributes, namely, Extension and Thought. Now this Existence, which has neither Extension nor Thought except as Attributes, although verbally differing from the Absolute Unconditioned, the One, of Plotinus, is really the same: it is the last abstraction which the human faculty can make: it is that *of which* nothing can be predicated, and yet which must be the final predicate of everything: division and subdivision, however prolonged, stop there, and admit as final the Unconditioned Unconditional Something, or that which Proclus (and after him Hegel) calls The Non-Being, *μὴ ὄν*, although it is not correct to call it nothing, *μηδέν*.

This conception, which it is impossible to state in words without stating gross contradictions, is the result of rigorous logic. The process is this: I have to discover that which is at the bottom of the mystery of existence—the great First Cause; and, to do this I must eliminate one by one everything which does not present itself as self-existing, self-sufficing, as necessarily the *first* of all things, the *ἀρχή*.

The ancients began their speculations in the same way, but with less knowledge of the conditions of inquiry. Hence Water, Air, Soul, Number, Force, were severally accepted as *Principia*. In the time of the Alexandrians something more subtle was required. They asked the same question, but they asked it with a full consciousness of the failure of their predecessors. Even Thought would not satisfy them as a *Principium*; nor were they better satisfied with abstract Existence. They said there is something beyond Thought, something beyond Existence: there is *that which* thinks, *that which* exists. This '*that*,' this Indeterminate Ineffable,

is the Principium. It is self-sufficing, self-existent; nothing can be conceived beyond it. In the old Indian hypothesis of the world being supported by an elephant, who stood on the back of a tortoise, the tortoise standing on nothing, we see a rude solution of the same problem: the mind is forced to arrest itself somewhere, and wherever it arrests itself it is forced to declare, explicitly or implicitly, that it stops at Nothing; because, as soon as it predicates anything of that at which it stops, it is forced to admit *something* beyond: if the tortoise stands on the back of some other animal, *upon what* does that other animal stand?

Philosophy, when employed upon this subject, necessarily abuts upon Nothing, upon absolute Negation; the terms in which this conception is clothed may differ, but the conception remains the same: Plotinus and Hegel shake hands.

In reviewing the history of Greek speculation, from the 'Water' of Thales to the 'Absolute Negation' of Plotinus, what a reflection is forced upon us of the vanity of metaphysics! So many years of laborious inquiry, so many splendid minds engaged, and, after the lapse of ages, the inquiry remains the same, the answer only more ingeniously absurd! Was, then, all this labour vain? Were those long laborious years all wasted? Were those splendid minds all useless? No: earnest endeavour is seldom without result. Those centuries of speculation were not useless, they were the education of the human race. They taught mankind this truth at least: the Infinite cannot be known by the finite: and man, as finite, can only know phenomena. Those labours, so fruitless in their immediate object, have indirect lessons. The speculations of the Greeks preserve the same privilege as the glorious products of their art and literature; they are the models from which the speculations of posterity are reproductions. The history of modern metaphysical philosophy is but the narrative of the same struggles which agitated Greece. The same problems are revived, and the same answers offered.

§ IV. THE DOCTRINE OF EMANATION.

Ancient Metaphysics propounds three questions: Has human knowledge any absolute certainty? What is the nature of God? What is the origin of the World?

Our review of the various attempts to answer these questions has ended in the Alexandrian School, which answered them as follows: 1st. Human knowledge is necessarily uncertain; but this difficulty is got over by the hypothesis of an Ecstasy, in which the soul becomes identified with the Infinite. 2nd. The nature of God is a triple Unity—three hypostases of the One Being. 3rd. The origin of the world is the law of *Emanation*.

This third answer is of course implied in the second. God, as Unity, is not Existence; but he becomes Existence by the Emanation from his Unity (Intelligence), and by the second emanation from his Intelligence (Soul), and this Soul, in its manifestations, is the World.

Hitherto dualism has been the universal creed of those who admitted any distinction between the world and its Creator. Jupiter organizing Chaos; the God of Anaxagoras whose force is wasted in creation; the *δημιουργός* of Plato who conquers and regulates Matter and Motion; the immovable Thought of Aristotle: all these creeds were dualistic; and, indeed, to escape dualism was not easy.

If God is distinct from the World, dualism is at once assumed. If he is distinct, he must be distinct in Essence. If distinct in essence, the question of Whence came the world? is not answered; for the world must have existed contemporaneously with him.

Here lies the difficulty: either God made the world, or he did not. If he made it, whence did he make it? He could not, said logic, make it out of Nothing: for Nothing can come of Nothing; he must, therefore, have made it out of his own substance. If it is made out of his own substance, then it is identical with him: it must then have existed already in him,

or he could not have produced it. But this identification of God with the world is Pantheism; and begs the question it should answer.

If he did not make it out of his own substance, he must have made it out of some substance already existing; and thus also the question still remains unanswered.

This problem was solved by the Christians and Alexandrians in a similar, though apparently different, manner. The Christians said that God created the world out of Nothing by the mere exercise of his omnipotent will; for to Omnipotence everything is possible; one thing is as easy as another. The Alexandrians said that the world was distinct from God *in act* rather than *in essence*: it was the manifestation of his will, or of his intelligence.

Thus the world is God; but God is not the world. Without the necessity of two principles, the distinction is preserved between the Creator and the Created. God is not confounded with Matter; and yet philosophy is no longer oppressed with the difficulty of accounting for two eternally existing and eternally distinct principles.

Plotinus had by his Dialectics discovered the necessity of Unity as the basis of existence: he had also by the same means discovered that the Unity could not possibly remain alone: otherwise, there would never have been the Many. If the Many implies the One, the One also implies the Many. It is the property of each principle to engender that which follows it: to engender it in virtue of an ineffable power which loses nothing of itself. This power, ineffable, inexhaustible, exercises itself without stopping, from generation to generation, till it attains the limits of possibility.

By this law, which governs the world, and from which God himself cannot escape, the totality of existences, which Dialectics teach us to arrange in a proper hierarchy from God to sensible Matter, appear to us thus united in one indissoluble chain, since each being is the necessary product of that which precedes it, and the necessary producer of that which succeeds it.

If asked why Unity should ever become Multiplicity—why God should ever manifest himself in the world? the answer is ready: The One, as conceived by the Eleatics, had long been found incomplete; for a God who had no intelligence could not be perfect: as Aristotle says, a God who does not think is unworthy of respect. If, therefore, God is Intelligent, he is necessarily active: a force that engenders nothing, can that be a real force? It was, therefore, in the very nature of God a necessity for him to create the world: *ἐν τῇ φύσει ἦν τὸ ποιεῖν.*

God, therefore, is in his very essence a Creator, *ποιητής*. He is like a Sun pouring forth his rays, without losing any of its substance: *οἶον ἐκ φωτός, τὴν ἐξ αὐτοῦ περιλαμβάνειν.* All this flux—this constant change of things, this birth and death—is but the restless manifestation of a restless force. These manifestations have no absolute truth, no duration. The individual perishes, because individual: it is only the universal that endures. The individual is the finite, the perishable; the universal is the infinite, immortal. God is the only existence: he is the real existence, of which we, and other things, are but the transitory phenomena. And yet timid ignorant man, timid because ignorant, fears death! To die is to live the true life: it is to lose, indeed, sensation, passions, interests, to be free from the conditions of space and time,—to lose personality; but it is also to quit this world and to be born anew in God,—to quit this frail and pitiable individuality, to be absorbed in the being of the Infinite. To die is to live the true life. Some faint glimpses of it—some overpowering anticipations of a bliss intolerable to mortal sense, are realized in the brief moments of Ecstasy, wherein the Soul is absorbed in the Infinite, although it cannot long remain there. Those moments so exquisite yet so brief are sufficient to reveal to us the divinity, and to show us that deep embedded in our personality there is a ray of the divine source of light, a ray which is always struggling to disengage itself, and return to its source. To die is to live the true life; and

Plotinus dying, said, in his agony, 'I am struggling to liberate the divinity within me.'

This mysticism is worth attention, as indicative of the march of the human mind. In many preceding thinkers we have seen a very strong tendency towards the desecration of personality. From Heraclitus to Plotinus there is a gradual advance in this direction. The Cynics and the Stoics made it a sort of philosophical basis. Plato implicitly, and sometimes explicitly, gave it his concurrence. The conviction of man's insignificance, and of the impossibility of his ever in this world ascertaining the truth, seem to have oppressed philosophers with self-contempt. To curse the bonds which bound them to ignorance, and to quit a world in which they were thus bound, were the natural consequences of their doctrines; but, linked mysteriously as we are to life—even to the life we curse—our doctrines seldom lead to suicide. In default of suicide, nothing remained but Asceticism—a moral suicide. As man could not summon courage to quit the world, he would at least endeavour to lead a life as far removed from worldly passion and worldly condition as was possible; and he would welcome death as the only true life.

CHAPTER III.

PROCLUS.

PLOTINUS attempted to unite Philosophy with Religion, attempted to solve by Faith the problems insoluble by Reason; and the result of such an attempt was necessarily mysticism. But, although the mystical element is an important one in his doctrine, he did not allow himself to be seduced into all the extravagances which naturally flowed from it. That was reserved for his successors, Iamblicus in particular, who performed miracles, and constituted himself High Priest of the Universe.

With Proclus the Alexandrian School made a final effort, and with him its defeat was entire. He was born at Constantinople, A.D. 412. He came early to Alexandria, where Olympiodorus was teaching. He passed onwards to Athens, and from Plutarch and Syrianus he learnt to comprehend the doctrines of Plato and Aristotle. Afterwards, becoming initiated into the Theurgical mysteries, he was soon made a High Priest of the Universe.

The theological tendency is still more remarkable in Proclus than in Plotinus. He regarded the Orphic poems and the Chaldean oracles as divine revelations, and, therefore, as the real source of philosophy, if properly interpreted; and in this allegorical interpretation consisted his whole system.

'The intelligible forms of ancient poets,
The fair humanities of old religion,
The Power, the Beauty, and the Majesty,
That had her haunts in dale, or piny mountain,
Or forest by slow stream, or pebbly spring,
Or chasms and wat'ry depths; all these have vanish'd,

They live no longer in the faith of reason!
But still the heart doth need a language, still
Doth the old instinct bring back the old names.
And to yon starry world they now are gone,
Spirits or Gods that used to share this earth
With man as with their friend.*

To breathe the breath of life into the nostrils of these defunct deities, to restore the beautiful Pagan creed, by interpreting its symbols in a new sense, was the aim of the whole Alexandrian School.

Proclus placed Faith above Science. It was the only faculty by which The Good, that is to say, The One, could be apprehended. 'The philosopher,' said he, 'is not the priest of one Religion, but of all Religions;' that is to say, he is to reconcile all modes of belief by his interpretations. Reason is the expositor of Faith. But Proclus made one exception: there was one Religion which he could not tolerate, which he could not interpret,—that was the Christian.

With this conception of his mission, it is easy to see that his method must have been eclectic. Accordingly, in making Philosophy the expositor of Religion, he relied upon the doctrines of his predecessors without pretending to discover new ones for his purpose. Aristotle, whom he called 'the philosopher of the understanding,' he regarded as the man whose writings formed the best introduction to the study of wisdom. In him the student learnt the use of his Reason; learnt also the forms of thought. After this preparatory study came the study of Plato, whom he called the 'philosopher of Reason, the sole guide to the region of Ideas, that is, of Eternal Truths. The reader will probably recognize here the distinction between Understanding and Reason, revived by Kant, and so much insisted on by Coleridge and his followers.

Plato was the idol of Proclus; and the passionate disciple thought every word of the master an oracle; he discovered everywhere some hidden and oracular meaning, interpreting the simplest recitals into sublime allegories. Thus the

* Coleridge, in his translation of the *Puccolomini*.

affection of Socrates for Alcibiades became the slender text for a whole volume of mystical exposition.

It is curious to notice the transformations of Philosophy in the various schools. Socrates interpreted the inscription on the temple at Delphi, 'Know thyself,' as an exhortation to psychological and ethical study. He looked inwards, and there discovered certain truths which scepticism could not darken; and he discoursed, says his biographer, on Justice and Injustice, on things holy and things unholy.

Plato also looked inwards, hoping to find there a basis of philosophy; but his 'Know thyself' had a different significance. Man was to study himself, because, by becoming thoroughly acquainted with his mind, he would become acquainted with the eternal Ideas of which sense awakened Reminiscence. His self-knowledge was Dialectical, rather than Ethical. The object of it was the contemplation of eternal Existence, not the regulation of our worldly acts.

The Alexandrians also interpreted the inscription; but with them the Socratic conception was completely set aside, and the Platonic conception carried to its limits. 'Know thyself,' says Proclus, in his commentary on Plato's *First Alcibiades*, 'that you may know the essence from whose source you are derived. Know the divinity that is within you, that you may know the divine One of which your soul is but a ray. Know your own mind, and you will have the key to all knowledge.' These are not the words of Proclus, but they convey the meaning of many pages of his mystical dialectics.

We are struck in Proclus with the frank and decided manner in which Metaphysics is assumed to be the only possible science; we are struck with the *naïve* manner in which the fundamental error of metaphysical inquiry is laid open to view, and presented as an absolute truth. In no other ancient system is it stated more nakedly. If we desired an illustration of the futility of metaphysics we could not find a better than is afforded by Proclus, who, be it observed, only pushed the premisses of others to their rigorous conclusions.

He teaches that the hierarchy of ideas, in which there is a

gradual generation from the most abstract to the most concrete, exactly corresponds with the hierarchy of existences, in which there is a constant generation from the most abstract (Unity) to the most concrete (phenomena): so that the relations which these ideas bear to each other, the laws which subordinate one to the other—in a word, the forms of the nomenclature of human conceptions—express the real causes, their action, their combinations; in fact, the whole system of the universe.*

This is frank. The objection to the metaphysician has been that he looks *inwards* to discover that which lies *without* him, hoping, in his own conceptions of that which he is seeking to know, to find the thing he seeks. The 'philosophers of the Understanding' aver that to analyze your mind is to learn the nature of your mind: nothing else. Proclus boldly assumes that to know the nature of your own mind is to know the whole universe. This is at least consistent. But one might reasonably ask how this knowledge is to be gained? not simply by looking inwards, or else all philosophers would have gained it; not even by meditation. How then? Listen:—

'Mercury, the Messenger of Jove, reveals to us Jove's paternal will, and thus teaches us science; and, as the author of all investigation, transmits to us, his disciples, the genius of invention. The Science which descends into the soul from above is more perfect than any science obtained by investigation; that which is excited in us by other men is far less perfect. Invention is the energy of the soul. The Science which descends from above fills the soul with the influence of the higher Causes. The Gods announce it to us by their presence and by illuminations, and discover to us the order of the universe.'

Of course the mystic who had revelations from above, dispensed with the ordinary methods of investigation; and here again we see Proclus consistent, though consistent in absurdity.

* This is also the doctrine of HEGEL.

CHAPTER IV.

CONCLUSION OF ANCIENT PHILOSOPHY.

WITH Proclus the Alexandrian School expired; with him Ancient Philosophy ceased. Religion, and Religion only, seemed capable of affording satisfactory answers to the questions which perplexed the human race, and Philosophy was reduced to the subordinate office which the Alexandrians had consigned to the Aristotelian Logic. Philosophy became the servant of Religion, no longer reigning in its own right.

Thus was the circle of endeavour completed. With Thales, Reason separated itself from Faith; with the Alexandrians, the two were again united. The centuries between these epochs were filled with helpless struggles to overcome an insuperable difficulty.

The difference is great between the childlike question of the Ionian thinker, and the answer of the Alexandrian mystic: and yet each stands upon the same ground, and looks out upon the same troubled sea, hoping to detect a shore, ignorant that all Philosophy

'is an arch wherethrough
Gleams that untravelled world, whose margin fades
For ever and for ever as we move.'

But, to the reflective student who thus sees these men, after centuries of endeavour, fixed on the self-same spot, the Alexandrian straining his eager eyes after the same object as the Ionian, and neither within the possible range of vision, there is something which would be unutterably sad, were it not corrected by the conviction that these men were fixed to one spot, because they had not discovered the only true pathway, a pathway which those who came after them securely trod.

Still, the spectacle of human failure, especially on so gigantic a scale, cannot be without some pain. So many hopes thwarted, so many great intellects wandering in error, are not to be thought of without sadness. But it bears a lesson which we hope those who have followed us thus far will not fail to read: a lesson on the vanity of ontological research; a lesson which almost amounts to a demonstration of the impossibility of the human mind ever compassing those exalted objects which its speculative ingenuity suggests as worthy of its pursuit. It points to that profound remark of Auguste Comte, that there exists in all classes of our investigations a constant and necessary harmony between the extent of our real intellectual wants, and the efficient extent, actual or future, of our real knowledge.

But these great thinkers, whose failures we have chronicled, did not live in vain. They left the great problems where they found them: but they did not leave Humanity as they found it. Metaphysics might be still a region of doubt; but the human mind, in its endeavours to explore that region, had learnt in some measure to ascertain its weakness and its force. Greek Philosophy was a failure; but Greek Inquiry had immense results. Methods had been tried and discarded; but great preparations for the real Method had been made.

Moreover Ethics had become elevated to the rank of a science. In the Pagan Religion morality consisted in obeying the particular Gods:—to propitiate their favour was the only needful art. Greek Philosophy opened men's eyes to the importance of human conduct—to the importance of moral principles, which were to stand in the place of propitiations. The great merit of this is due to Socrates. He objected to propitiation as impious: he insisted upon moral conduct as alone guiding man to happiness here and hereafter.

But the Ethics of the Greeks were at the best narrow and egoistical. Morality, however exalted or comprehensive, only seemed to embrace the Individual; it was extremely incomplete as regards the Family; and had scarcely any suspicion of what we call Humanity. No Greek ever attained the

sublimity of such a point of view. The highest point he could attain was to conduct *himself* according to just principles; he never troubled himself with others. By the introduction of Christianity, Ethics became Social, as well as Individual.

So far advanced are we in the right direction—so earnestly are we engaged in the endeavour to perfect Social as well as Individual Ethics—that we are apt to look down upon the progress of the Greeks as trivial; but it was immense, and in the history of Humanity must ever occupy an honourable place.

Ancient Philosophy expired with Proclus. Those who came after him, although styling themselves philosophers, were in truth religious thinkers employing philosophical formulæ. No one endeavoured to give a solution of the three great problems: Whence came the world? What is the nature of God? What is the nature of human knowledge? Argue, refine, divide and subdivide as they would, the religious thinkers only used Philosophy as a subsidiary process: for all the great problems, Faith was their instrument.

The succeeding Epochs are usually styled the Epochs of Christian Philosophy; yet Christian Philosophy is a misnomer. A christian may be also a philosopher; but to talk of Christian Philosophy is an abuse of language. Christian Philosophy means Christian Metaphysics; and that means the solution of metaphysical problems upon Christian principles. Now what are Christian Principles but the Doctrines *revealed* through Christ; revealed because inaccessible to Reason; revealed and accepted by Faith, because Reason is utterly incompetent?

So that metaphysical problems, the attempted solution of which by Reason constitutes Philosophy, are solved by Faith, and yet the name of Philosophy is retained! But the very groundwork of Philosophy consists in reasoning, as the groundwork of Religion is Faith. There cannot, consequently, be a Religious Philosophy: it is a contradiction in terms. Philosophy may be occupied about the same prob-

lems as Religion; but it employs altogether different criteria, and depends on altogether different principles. Religion may, and should, call in Philosophy to its aid; but in so doing it assigns to Philosophy only the subordinate office of illustrating, reconciling, or applying its dogmas. This is not a Religious Philosophy; it is Religion *and* Philosophy, the latter stripped of its boasted prerogative of deciding for itself, and allowed only to employ itself in reconciling the decisions of Religion and of Reason.

From these remarks it is obvious that our History, being a narrative of the progress of Philosophy only, will not include any detailed account of the so-called Christian Philosophy, because that is a subject strictly belonging to the History of Religion.

Once more we are to witness the mighty struggle and the sad defeat; once more we are to watch the progress and development of that vast but ineffectual attempt which the sublime audacity of man has for centuries renewed. Great intellects and great hopes are once more to be reviewed; and the traces noted which they have left upon that desert whose only semblance of vegetation is a mirage,—the desert without fruit, without flower, without habitation, arid, trackless, and silent, but vast, awful, and fascinating. To trace the footsteps of the wanderers—to follow them on their gigantic journeys—to point again the moral of

'Poor Humanity's afflicted will
Struggling in vain with ruthless destiny,'

will be the object of our SECOND VOLUME.

END OF THE FIRST VOLUME.

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THE HISTORY

OF

PHILOSOPHY.

THE TRANSITION PERIOD.

*Philosophy struggles to emancipate itself from Theology,
and at the close of the Middle Ages finally succeeds.*

ANCIENT PHILOSOPHY reigned for about 1,000 years before its final deposition by Theology. An interval of another 1,000 years may be assigned as the Transition Period between Ancient and Modern Philosophy, i.e. from the extinction of the Greek schools, in the sixth century, to the separation of Philosophy from Theology, by Bacon and Descartes, in the sixteenth.

The peculiarity of this Transition Period is the constant struggle of Reason to assert and justify her independence—the claim of Philosophy to exist as a function of the human mind. And this claim, under varying fortunes, was made good. The struggle, long doubtful, ended in emancipation. We have seen how Philosophy, disengaging itself from Theology, successively tried to solve all the capital problems; and how, failing everywhere, because the Method pursued was one which made failure inevitable, it once more, throughout Christendom, relapsed under the dominion of Theology. We have now to see the inevitable disquiet of thought,

produced by the manifest incompetence of Theology to answer questions beyond its reach; we have to see it again seeking the aid of Philosophy, and in this search gradually becoming more and more impatient of Theology, till a final separation of the two is once more proclaimed. Thus Bacon and Descartes stand in a position somewhat analogous to that of Thales; but they have the incalculable advantage of inheriting the experience of twenty centuries, and with it the incomparable advantage of a new Method. If, in the three centuries which have since elapsed, there has been an immense progress in all departments of positive knowledge, it has been owing to this new Method. If at the same time there has been little or no progress in Metaphysics, the latest ontological systems being little distinguishable from the Alexandrian, this has been owing to the retention of the old Method, and the persistence in unverifiable speculation.

Although the Transition, commonly known as the Middle Ages, extends over nearly a thousand years, we must, as Hegel says,* put on seven-league boots to traverse it. The nature and scope of this History, no less than my own imperfect acquaintance with the writings of the period, render it necessary for my survey to be rapid. I shall distribute it into three chapters:—

1. SCHOLASTICISM.
2. ARABIAN PHILOSOPHY.
3. THE RISE OF POSITIVE SCIENCE.

Although each section would require a separate work to do it justice, it can only receive here a slight and superficial treatment, enough to carry on the story of philosophic evolution. The student will find ampler detail in the works I shall have to cite.

* HEGEL: *Gesch. d. Phil.* iii. 99.

CHAPTER I.

SCHOLASTICISM.

§ I. GENERAL SURVEY.

BY Scholasticism is meant the philosophy which was dominant in the schools during the greater part of the Transition. It has long ceased to have any but an historical interest. That interest is, however, considerable, and would be more generally felt if History were studied in a scientific spirit.

As a Philosophy purporting to answer any of the great questions, its value is inappreciable, and its condemnation has long gone forth; nor can there be any wisdom in the attempt to reverse a verdict so absolute, so general, and so well founded. A few metaphysicians, clinging to their trust in the Subjective Method, and admiring the ingenuity and subtlety often displayed by the illustrious doctors of an early age, will energetically protest against the careless contempt exhibited by writers who are wholly ignorant of the works which they despise. And there is another reason for such a protest. The man who in this age can read with patience the works of an Abelard, an Aquinas, or an Albertus, must have a native affinity for dialectical ingenuity, which renders him incompetent to appreciate the grounds of the general neglect. Such a mind cannot perceive what is notorious to others: the failure of the Subjective Method; a failure made conspicuous by the success of the Objective Method. It is this failure which has closed the folios of Scholasticism; the depressing weariness and impatience which cause us to push them aside after each new effort at study, arise, I conceive, from our sense of the intrinsic

futility of the questions discussed, and the mode of discussing them, even more than from the arid and often frivolous poverty of the style. It is the geography of an undiscoverable country, described without splendour of imagination, and without wealth of suggestive analogy.

The work of the schools had to be done, but it is at an end. Their folios are fossils. Monstrous and lifeless shapes of a former world, having little community with the life of our own, they have for us an interest similar to that yielded by the megatherium, and the dinornis. We are no longer perplexed by their problems, but we are interested in the fact that their problems did once perplex the most eminent minds.

We must not forget that to Scholasticism we owe the emancipation of Philosophy. It was the first, and at that period the only possible, solvent of Theology. By establishing the claim of Reason—though only as a handmaid to Faith, *ancilla theologiæ*—it brought into vigorous activity the great instrument Doubt, the instrument of research. By its own failure in solving the questions it had raised, it prepared the way for the negative, but valuable solutions of Science. Men learned in reasoning freely to reason well. It was a great thing in those ages to reason on abstract subjects at all.

The universal dominion of Rome, fruitful in so many respects, was fatal to Science, then in its infancy. The disruption of the Empire, also in many respects beneficial to Humanity, was fatal to Literature. Rome did her work, and left her legacy; but that legacy, so valuable as *discipline*, was less valuable as *culture*. Her dominion was succeeded by the dominion of the Church; and the Church, both by instinct and by precept, was opposed to Science and Literature. It is right that we should understand this. The great benefits which the Church conferred on Humanity can be denied only by a narrow philosophy; but her benefits were not unalloyed; and the disastrous influence she exercised on Letters and Science may be estimated by the simple fact

that, during the nine centuries of her undisputed dominion, not a single classic writer, not a single discoverer whose genius enlarged the intellectual horizon, not a single leader of modern thought arose to dignify her reign. The darkness of the Dark Ages was deepest when the power of the Church was least disputed: that darkness began to break when the doctrines of the Church began to be called in question; the dawn was coeval with an insurrection.

Nor could it have been otherwise. The Church claimed spiritual supremacy, and aiming at the reconstruction of society on a basis of spiritual unity, was necessarily opposed to the pretensions of spiritual rivals. It held the highest truth in charge; with the highest it also claimed the lowest. Opposed as it was to this world, striving to regulate this life with a view to the life to come, its *other-worldliness*, while upholding an ideal before men's eyes, had the disadvantage of discrediting the real. Profane knowledge was, therefore, doubly despised; it was despised because it related to things of this world, and it was despised because it gave no insight into the next. It was dreaded even more than it was despised, dreaded because it claimed a share in the government of men's minds. The indignation which has so often vituperated the Church, because the Church was intolerant, would have been better directed against untutored human nature; for it is a grave error, to suppose that bigotry is the monopoly of theologians, or that polemical unfairness is less conspicuous in science and philosophy than in theology. The distinguishing characteristic of theological intolerance, is its belief in itself as a virtue. The conviction of finality fans into a theological flame the embers of bigotry that slumber in us all. Without rare largeness of mind, or exceptional sweetness of temper, we cannot be patient when our beliefs are opposed. Naturally we are persuaded of their truth; otherwise they would not be our beliefs; and the very love of truth, to which our opponent appeals, urges us to stand firmly by our (true) opinions. The only thing that could make us hesitate is an abiding

consciousness of fallibility: and this is found in few minds only—those by nature sceptical and unstable, or by long training tutored into circumspection. In proportion to the importance we attach to the opinion our irritation at doubt increases; and when our opinions have the consecration of deep feelings and large interests, it is inevitable that we should be alarmed and pained by contradiction. Hence the very word heresy, which simply means private judgment, has in all times borne an opprobrious connotation.*

The Church was dominant; and Theology, in all respects, opposed to the development of the intellect and the enlargement of knowledge, had to be dissolved by Metaphysics before Science could gain a hearing. It was Scholasticism which acted as the solvent. And here we may see an illustration of Comte's law of evolution. An abrupt transition from theological explanations of the facts of the universe to scientific explanations—omitting the intermediate stage of Metaphysics—would have been disastrous. The Church held the position of spiritual headship. Science could not have grown up under its dominion, for no sooner would their essential rivalry have become manifest than the Church would at once have suppressed the audacious innovation of rational research.

An apparent contradiction may be seen in the fact that the Arabians had no such intermediate stage, but passed over to Science almost as soon as they entered upon intellectual inquiry. The contradiction is only apparent, not real. Science was cultivated by sceptical philosophers under sceptical emirs and caliphs. But this sudden burst of a novel enthusiasm was succeeded by centuries of absolute apathy. Islamism where it had been weak grew strong.

* 'The word heresy is Greek,' says HOBBS, 'and signifies a *taking* of anything, particularly the taking of an opinion. After the study of philosophy began in Greece, and philosophers disagreeing among themselves had started many questions not only about things natural, but also moral and civil, because every one *took* what opinion he pleased, each several opinion was called a *heresy*, which signified no more than a private opinion, without reference to truth or falsehood.'—Quoted by RICHARDSON: *English Dictionary*.

Caliphs and emirs, no less than philosophers, fell under the dominion of an energetic priesthood, and under that rule all intellectual activity withered. Theology in Europe grew weaker and weaker under the dissolving agency of Metaphysics. In Islam it grew stronger and stronger because its chief antagonist was Science, and *that* was too imperfectly matured to hold its place against Theology.

The alliance with, and subordination to, Theology, which constitute the fatal weakness of Scholasticism considered as Philosophy, constitute its great value as an agent in the evolution of thought. No wider reach was possible at that epoch. If Reason was to exercise its prerogative in a society governed by a Church, nothing but such an issue as Scholasticism could be permitted it. The dogmas were fixed. The solutions were found. Nothing remained for research, except the reconciliation of these dogmas with Reason. A new solution would have been a heresy. Philosophers were allowed to seek new routes; but they were not allowed to arrive at a new conclusion. It was something, however, to be allowed to take new routes. They thus trained themselves for travel.

'Philosophy,' said Tertullian, with perfect truth, 'is the patriarch of all the heresies.' In travelling along new roads it was inevitable that minds should arrive at new conclusions. The Church was alert. It scented a taint from afar. No sooner was danger signalled than persecution followed. This vigilance and violence greatly obstructed the free movement of thought. No questions, however seemingly remote, were long permitted to hold themselves aloof from theological direction. Plato and Aristotle could debate whether general terms were only terms or had also corresponding objects, and they debated this under no priestly dictation; but William of Champeaux and Abelard could only debate it under the ominous shadow of St. Peter's.

And yet this theological obstruction was also in one sense an aid. In those days of ignorance and incurious apathy there was an advantage in having the stimulus of dogmas

which for all men had profound interest. On subjects remote from obvious and daily needs, our imperfect intellects need the stimulus of passion before they will undergo the toil of research. In those days, far more than in our own, men would not have given their lives to the discussion of abstruse and abstract questions unless sustained by the passionate fervour of theological controversy.

Something may also be said in favour of that art of disputation against which so much eloquence has been expended. It was doubtless carried to a dangerous and ridiculous excess, and seems utterly worthless and wearisome now. Yet it was to the athletes of the Middle Ages what parliamentary debate has been to the English: a good, though by no means an unmixed good, and far from the best. We may admit that the art was ineffectual as an instrument of research, and was so far injurious that it withdrew men's energies from patient contemplation of phenomena, and employed them in the easy but illusory manipulation of formulas, thus rearing curious exotics sterile of all flowers or fruit. Nevertheless, in those days any intellectual activity which could escape on the one hand from the oppression of barbarian indifference, and on the other from theological dictation, was of value; and as the admirable historian of Scholasticism remarks: 'En pressant avec trop d'énergie, dans l'ardeur de la controverse, les problèmes de l'ordre logique, on devait nécessairement en faire sortir des problèmes ontologiques, psychologiques, métaphysiques. Est-ce que l'esprit humain, une fois engagé dans la voie de la recherche, peut s'arrêter avant d'être satisfait, avant de toucher le but, ou du moins avant de croire l'avoir touché?'*

§ II. SCOTUS ERIGENA AND ANSELM OF CANTERBURY.

So much by way of general consideration. Descending to particulars, we find Scholasticism to be not a doctrine but a movement. It began with the schools opened by Charle-

* HAURÉAU: *De la Philosophie Scolastique*, 1850, i. 419.

magne.* With these schools it flourished, and with them it declined. The instruction being oral, an art of disputation naturally arose; and the instruction was necessarily oral in the absence of a press. When the invention of printing furnished combatants with a wider arena and more effective weapons, the importance of the schools declined. Philosophy became secular, and passed from the priests to the public. But when the only means of addressing audiences was from professional chairs, students passed over the seas and over the Alps to catch the words which fell from the lips of some renowned teacher. Paris was for many years the Athens of Scholasticism. The diploma of philosophy was given there. He who had not listened to its professors was scouted as ignorant. From the remote corners of Britain and the fastnesses of Calabria, from Spain and Germany, from Italy and Poland, came the young clerks who felt within them the restlessness of thought. They started on foot, alone, animated by high hopes, to brave the many perils of that journey, glad if they could sometimes gain the protection of a troop of soldiers, happy if a night's shelter could be found at a monastery, or, failing that, they would urge their claim as scholars to the hospitality of private citizens—a claim rarely denied them.†

Of the many renowned teachers only a few names have now a familiar sound. The list is opened by Scotus Erigena, with whom, in the middle of the ninth century, Scholasticism may be said to begin, if any definite beginning can properly be assigned to it.

And here, at its very origin, we find an element at work which was essential to progress, and without which the great subsequent influences of Arabian and Greek writers would have been powerless—the element of Doubt. Timidly

* 'Dès l'ouverture des écoles du moyen âge ce titre fut donné à tous les professeurs chargés d'instruire la jeunesse. Employé adjectivement, il servit à désigner les diverses branches de leur enseignement, et l'on dit *la théologie scolastique*, *l'histoire scolastique*, *la philosophie scolastique*. En ce sens la philosophie scolastique est la philosophie professée dans les écoles du moyen âge.' —HAURÉAU, i. 7.

† HAURÉAU, i. 24.

as this potent weapon may have been handled, disguised as scepticism was under various subterfuges, conscious and unconscious, nevertheless its presence is unmistakable. Appearing in the shape of a feeble protest against Authority, and appealing to a higher wisdom than even that of the Fathers, it secured its footing in the domain of intelligence. The invocation of Reason, under no matter what disguise, is only the confused cry of Doubt. Faith has no need of Reason. If such aid be sought it can only be to satisfy the unquiet intellect which cannot escape doubts. Scholasticism, as we have said, was the movement of the intellect to justify by Reason several of the dogmas of Faith. Here to excuse was to accuse.

In assigning this position to Scotus Erigena, I do not of course mean that he was the first doubter in the Christian empire, nor that he was in any way a concealed rationalist. Some modern historians probably need the correction suggested by Mr. Maurice; they may have fallen into the common error of reading modern meanings into ancient texts when they attribute to Erigena a rationalistic spirit. Nevertheless, under any interpretation of his words, there is great significance in the fact that Erigena could write thus:—

‘Thou art not ignorant,’ says the master, ‘that I think that which is first in nature is of greater dignity than that which is first in time.’ ‘This,’ says the disciple, ‘is known to almost all.’ ‘We have learnt further,’ says the master, ‘that Reason is first in nature, and Authority in time. For although nature was created together with time, Authority did not begin to exist from the beginning of nature and time. But Reason has arisen with nature and time from the beginning of things. Reason itself teaches this. For Authority no doubt hath proceeded from Reason, but Reason not by any means from Authority. And all Authority which is not approved by true Reason turns out to be weak. But true Reason, seeing that it stands firm and immutable, protected by its own virtues, needs not to be strengthened by

any confirmation of Authority. True Authority, indeed, seems nothing but Truth united by the power of Reason, and transmitted in letters by the holy Fathers for the benefit of posterity.’*

M. Guizot cites the following passages also from Erigena: ‘We must not adduce the opinions of the holy Fathers unless when necessary to strengthen reasoning in the eyes of men who, unpractised in reasoning, yield rather to Authority than to Logic.’ ‘The safety of faithful souls consists in believing that which there is reason for affirming, and in comprehending that which there is reason for believing.’

It is possible, nay extremely probable, that Erigena may have had a very different conception from that which his words convey to our minds. ‘The *ratio*,’ according to Mr. Maurice, ‘which was coeval with nature, and to which all things in time are secondary, is that fixed Purpose, that Eternal Reason and Order, which man’s reason is created to investigate and perceive. Authority must not be set before this Reason precisely because it is the result of a Reason which is working under temporal conditions, though this Authority may be most helpful in assisting the reason of any individual man in his efforts to break loose from its time boundaries, and to enter into the truth of which it is in search.’

By subtleties like these Erigena may have disguised from himself the tendency of his teaching, but the instinct of the Church was not thus to be led astray. It felt the presence of an enemy. Horus, bishop of Lyons, thus rang the tocsin: ‘There have reached us the writings of a certain vain and upstart man, who disputing on the questions of prescience and predestination by the aid, as he boasts, of purely human and philosophic reasonings, has dared, without adducing the authority of the Scriptures and the Fathers, to affirm certain things, as if they were to be accepted on the sole strength of his presumptuous assertion. . . Nevertheless,

* Cited by MAURICE: *Medieval Philosophy*, 1859, p. 63.

as we hear, this man is admired by many a one learned and versed in the wisdom of the schools, and who by his vain and pernicious eloquence so subjugates his auditors, that they no longer humbly submit themselves to the divine Scriptures, nor to the authority of the Fathers, but prefer to follow his fantastic reveries.*

Erigena made himself the mouthpiece of those who sought a rational basis, however narrow, for their convictions. This idea once suggested could not be disregarded. The Church thundered against it; but the very echoes of that thunder only aroused a more wide-spread and prolonged attention to the idea. The pretension of Reason once asserted was too gratifying to the intellect not to find large acceptance. Erigena might be silenced; Berengarius was silenced; but Roscellinus appeared, and after him, with greater energy and immense effect, Abelard. Even Anselm, the saintly archbishop, helped the good cause in an indirect way: he consecrated the privileges of Reason by showing the harmony between Reason and Faith.

In the introduction to his *Monologium*, Anselm tells us that his brethren frequently requested him to set down in writing the ideas he had communicated to them in conversation. 'They begged me to borrow no important argument from Scripture, but to employ the ordinary arguments such as might be intelligible to all, to remain faithful to the rules of simple debate, seeking no other proof than such as resulted necessarily from the logical sequence of evidence.' He consented; yet he declared that in his work he has advanced nothing which is not scrupulously accordant with the writings of the Fathers, principally St. Augustin. The dread of heresy, natural to such a man, is visible throughout; and at the close of his invocation, which forms the first chapter of the *Prosologium*, he says: 'I do not attempt, O Lord, to penetrate thy profundity, because in no sense can I compare with it my intellect; but I do desire to comprehend thy truth, even

* Bishops in the ninth century seem to have been as powerful in debate as bishops in the nineteenth.

though imperfectly, that truth which my heart believes and cherishes. For I seek not to comprehend in order to believe, but I believe in order to comprehend. I believe because if I did not believe I should never comprehend.*

Faith was the regent of his philosophy. Human reason being incompetent to reach the heights of Revelation, the idea of disputing on any revealed doctrines was culpable temerity. The function of reason was to explain, not to dispute, the dogmas accredited by the Church. Hence the sub-title of his celebrated treatise *Prosologium* (in which he sets forth the *à priori* demonstration of the existence of God in terms scarcely distinguished from those subsequently used by Descartes) runs thus: *seu fides quærens intellectum*.†

Nevertheless, it is noticeable that Anselm always appeals to evidence and demonstration, not to authorities. It is in this that he is distinguished from the orthodox conservative minds of his age. The insurgent mind of Abelard took up the same position, but with more emphasis and ostentation. Him we may now consider more closely.

§ III. ABELARD.

The name of Abelard has been immortalised by association with that of a noble woman. It is because Heloise loved him, that posterity feels interested in him. M. Michelet indeed thinks that to Abelard she owes her fame: 'without his misfortunes she would have remained obscure, unheard of;' and in one sense this is true; but it is also true that,

* 'Neque enim quæro intelligere ut credam, sed credo ut intelligam. Nam et hoc credo, quia nisi credidero, non intelligam.' And in his *Epistles*, he says, 'Christianus per fidem debet ad intellectum proficere, non per intellectum ad fidem accedere, aut si intelligere non valet, a fide recedere.'

† The *Prosologium*, with the little tract in which GAUNILON pointed out the fundamental error of ANSELM in concluding that whatever was true of ideas must be true of realities, and ANSELM's reply, are among the rare scholastic works which, as far as my experience extends, a modern can read with the same pleasure as he would read any recent metaphysical treatise. They are subtle without being frivolous or wearisome. A translation of all three, together with the *Monologium*, may be found in BOUCHITTÉ: *Le Rationalisme Chrétien à la fin du XI^e siècle*. Paris, 1842.

without her love, Abelard would have long ago ceased to inspire any interest: for his was essentially a shallow, selfish nature. His popularity was rapid, loud, and scandalous. He was fitted for it, lived for it. But many a greater name has faded from the memories of men; many a once noisy reputation fails to awaken a single echo in posterity. Apart from the consecration of passion and misfortune, there is little in his life to excite our sympathy. Viewed in connection with Heloise he must always interest us; viewed away from her, he presents the figure of a quick, vivacious, unscrupulous, intensely vain Frenchman. But, in several respects, he represents the philosophic struggle of the twelfth century; and in this light we may consider him.

He was born in Brittany in 1079, of a noble family, named Bérenger. The name of Abelard came to him later. His master laughingly noticed his superficial manner of passing over some studies, filled as he was with others, and said, 'When a dog is well filled, he can do no more than lick the bacon.' The word *to lick*, in the corrupt Latin of that day, was *bajare*, and *Bajolardus* became the cognomen of this 'bacon-licking student' among his comrades, which he converted into *Habelardus*, 'se vantant ainsi de posséder ce qu'on l'accusait de ne pouvoir prendre.'* In the ancient writers the name is variously spelled, as Abailardus, Abaielardus, Abaulardus, Abbajalarius, Baalardus, Belardus, and in French as Abeillard, Abayelard, Abalard, Abaulard, Abaalary, Allebart, Abulard, Beillard, Baillard, Balard, and even Esbaillart; which variations seem to imply that the old French writers were as accurate in their spelling of their countrymen's names as their descendants are in spelling English and German names.

Abelard's father joined to his knightly accomplishments a taste for literature, as literature was then understood;

* CHARLES DE RÉMUSAT: *Abelard*, Paris, 1845, i. 13. This valuable monograph contains the fullest biography of Abelard and the best analysis of his works yet published. Indeed, before M. Cousin published the works of Abelard, in 1836, every account of the philosophy of this thinker was necessarily meagre and erroneous.

and this taste became so dominant in the mind of the youth, that he renounced the career of arms altogether for that of learning. Dialectics was the great science of that day, almost rivalling in importance the Theology which it served and disturbed by turns. It was an exercise of intellectual ingenuity, for which this youth manifested surprising aptitude. He travelled through various provinces disputing with all comers, like a knight-errant of philosophy, urged thereto by the goading desire of notoriety. This love of notoriety was his curse through life. At the age of twenty he came to Paris, hoping there to find a fitting opportunity of display—an arena for his powers as a disputant. He attended the lectures of William of Champeaux, the most renowned master of disputation, to whom students flocked from all the cities of Europe. The new pupil soon excited attention. The beauty of his person, the easy grace of his manner, his marvellous aptitude for learning, and still more marvellous facility of expression, soon distinguished him from the rest. The master grew proud of his pupil, loved him through this pride, and doubtless looked on him as a successor. But it soon became evident that the pupil so quick at learning did not sit there merely to learn; he was waiting for some good opportunity of display, waiting to attack his venerable master, whose secret strength and weakness he had discovered. The opportunity came; he rose up, and in the midst of all the students provoked William of Champeaux to discussion, harassed, and finally vanquished him. Rage and astonishment agitated the students; rage and terror the master. The students were indignant because they clearly saw Abelard's motive.

Abelard dates the origin of all his woes from this occasion, when he created enmities which pursued him through life; and, with a sophistication common to such natures, he attributes the enmities to envy at his ability, instead of to the real causes, namely his inordinate vanity and selfishness. For a time indeed the rupture with his master seemed successful. Although only two-and-twenty years of age he

established a school of philosophy at Melun, which became numerous attended, and spread his name far and wide. Emboldened by success, he removed his school still nearer to Paris—to Corbeil—in order, as he frankly tells us, that he might be more importunate to his old master. But his rival was still powerful, aged in science and respect. Intense application was necessary, and in the struggle Abelard's overtasked energies gave way. He was commanded by the physicians to shut up his school, and retire into the country for repose and fresh air.

In two years he returned to Paris, and saw with delight that his reputation had not been weakened by absence, but that on the contrary his scholars were more eager than ever. His old antagonist, William of Champeaux, had renounced the world, and retired to a cloister, where he opened the school of Saint-Victor, afterwards so celebrated. His great reputation, although suffering from Abelard's attacks, drew crowds. One day, when the audience was most numerous, he was startled by the appearance of Abelard among the students, come, as he said, to learn rhetoric. William was troubled, but continued his lecture. Abelard was silent until the question of 'Universals' was brought forward, and then suddenly changing from a disciple to an antagonist, he harassed the old man with such rapidity and unexpectedness of assault that William confessed himself defeated, and retracted his opinion. That retraction was the death of his influence. His audience rapidly dwindled. No one would listen to the minor points of Dialectics from one who confessed himself beaten on the cardinal point of all. The disciples passed over to the victor. When the combat is fierce between two lordly stags, the hinds stand quietly by, watching the issue of the contest, and if their former lord and master, once followed and respected, is worsted, they all without hesitation pass over to the conqueror, and henceforth follow him. Abelard's school became acknowledged as pre-eminent; and, as if to give his triumph greater emphasis, the professor to whom William of Champeaux

had resigned his chair was either so intimidated by Abelard's audacity, or so subjugated by his ability, that he offered his chair to Abelard, and ranged himself among the disciples.

Abelard was not content even with this victory. Although undisputed master in dialectics, he could not hear of any other teacher without envy. A certain Anselm taught Theology at Laon with immense success; and this was enough to trouble Abelard's repose; accordingly to Laon he went, ridiculed Anselm's style, laughed at the puerile admiration of the scholars, and offered to surpass the master in the explanation of Scripture. The scholars first laughed, then listened, and admired. Abelard departed, having excited anarchy in the school, and anguish in the heart of the old man.

His career, at this period, was brilliant. His reputation had risen above that of every living man. His eloquence and subtlety charmed hundreds of serious students, who thronged beneath the shadows of the cathedral in ceaseless disputation, thinking more of success in dispute than of the truths involved. M. Guizot estimates these students at not less than five thousand—of course not all at the same time. Amidst these crowds, Abelard might be seen moving with imposing haughtiness of carriage, not without the careless indolence which success had given; handsome, manly, gallant-looking, the object of incessant admiration. His songs were sung in the streets, his arguments were repeated in cloisters. The multitude reverentially made way for him as he passed; and from behind their window-curtains peeped the curious eyes of women. His name was carried to every city in Europe. The Pope sent hearers to him. He reigned, and he reigned alone.*

It was at this period that the charms and helpless position of Heloise attracted his vanity and selfishness. He resolved to seduce her; resolved it, as he confesses, after mature deliberation. He thought she would be an easy victim;

* 'Cum jam me solum in mundo superesse philosophum æstimarem.'—*Epist.* i p. 9.

and he who had lived in abhorrence of libertinage—*scortorum immunditiam semper abhorrebam*—felt that he had now attained such a position that he might indulge himself with impunity. We are not here attributing hypothetic scoundrelism to Abelard; we are but repeating his own statements. 'I thought, too,' he adds, 'that I should the more easily gain the girl's consent, knowing as I did to how great a degree she both possessed learning and loved it.' He tells us how he 'sought an opportunity of bringing her into familiar and daily intercourse with me, and so drawing her the more easily to consent to my wishes. With this view I made a proposal to her uncle, through certain of his friends, that he should receive me as an inmate of his house, which was very near to my school, on whatever terms of remuneration he chose; alleging as my reason that I found the care of a household an impediment to study, and its expense too burdensome.' The uncle, Fulbert, was prompted by avarice, and the prospect of gaining instruction for his niece, to consent. He committed her entirely to Abelard's charge, 'in order that whenever I should be at leisure from the school, whether by day or by night, I might take the trouble of instructing her; and should I find her negligent, use forcible compulsion. Hereupon I wondered at the man's excessive simplicity, with no less amazement than if I had beheld him entrust a lamb to the care of a famishing wolf; for in thus placing the girl in my hands for me not only to teach, but to use forcible coercion, what did he do but give full liberty to my desires, and offer the opportunity, even had it not been sought, seeing that, should enticement fail, I might use threats and stripes in order to subdue her?'*

The crude brutality of this confession would induce us to suppose it was a specimen of that strange illusion which often makes reflective and analytic minds believe that their enthusiasm and passions were calculations, had we not sufficient evidence, throughout Abelard's life, of his intense

* *Epist.* i.

selfishness and voracious vanity. History has no other such example of passionate devotion filling the mind of a woman for a dialectician. It was dialectics he taught her; since he could teach her nothing else. She was a much better scholar than he; in many respects better read. She was perfect mistress of Latin, and knew enough Greek and Hebrew to form the basis of her future proficiency. He knew nothing of Greek or Hebrew, although all his biographers, except M. Rémusat, assume that he knew them both: M. Michelet even asserting that he was the only man who did then know them.* In the study of arid dialectics, then, must we imagine Abelard and Heloise thrown together; and, in the daily communion of their minds, passion ripened, steeped in that vague, dream-like, but intense delight, produced by the contact of great intelligences; and, as the Spanish translator of her letters says, 'buscando siempre con pretexto del estudio los parages mas retirados'—they sought in the still air and countenance of delightful studies a solitude more exquisite than any society. 'The books were open before us,' says Abelard, 'but we talked more of love than philosophy, and kisses were more frequent than sentences.'†

In spite of the prudential necessity for keeping this intrigue secret, Abelard's truly French vanity overcame his prudence. He had written love-songs to Heloise; and, with the egotism of a bad poet and indelicate lover, he was anxious for these songs to be read by other eyes besides those for whom they were composed; anxious that other men should know his conquest. His songs were soon bandied about the streets. All Paris was in the secret of

* He knew a few terms current in the theological literature of the day, but had he known more, his ostentatious vanity would have exhibited the knowledge on all occasions. He expressly declares, moreover, that he was forced to read Greek authors in Latin versions. See Cousin's edition of the *Œuvres Inédites*, p. 43; also *Dialectica*, p. 200, where the non-existence of Latin versions is given as the reason of his ignorance of what ARISTOTLE says in his *Physics* and *Metaphysics*.

† *Epist.* i. p. 11. He adds, with his usual crudity: 'Et sæpius ad sinus quam ad libros reducebantur manus.'

his intrigue. That which a delicate lover, out of delicacy, and a sensible lover, out of prudence, would have hidden from the world, this coxcomb suffered to be profaned by being bawled from idle and indifferent mouths.*

At length even Fulbert became aware of what was passing under his roof. A separation took place; but the lovers continued to meet in secret. Heloise soon found herself pregnant, and Abelard arranged for her an escape to Brittany, where she resided with his sister, and gave birth to a son. When Fulbert heard of her flight, he was frantic with rage. Abelard came cringing to him, imploring pardon, recalling to him how the greatest men had been cast down by women, accused himself of treachery, and offered the reparation of marriage provided it were kept secret; because his marriage, if made known, would be an obstacle to his rising in the Church, and the mitre already glimmered before his ambitious eyes. Fulbert consented. But Heloise, with womanly self-abnegation, would not consent. She would not rob the world of its greatest luminary. 'I should hate this marriage,' she exclaimed, 'because it would be an opprobrium and a calamity.' She recalled to Abelard various passages in Scripture and ancient writers, in which wives are accursed, pointing out to him how impossible it would be for him to consecrate himself to philosophy unless he were free: how could he study amid the noises of children and domestic troubles of a household?—how much more honourable it would be for her to sacrifice herself to him! She would be his concubine. The more she humiliated herself for him the greater would be her claims upon his love; and thus she would be no obstacle to his advancement, no impediment to the free development of his genius.

'I call God to witness,' she wrote many years afterwards,

* That this vanity and indelicacy are eminently French, though unhappily not exclusively French, will be admitted by all who are conversant with the life and literature of that remarkable people. This national peculiarity had not escaped the piercing gaze and healthy instincts of MOLIÈRE, who has an admirable passage on it: see Arnolphe's monologue, act iii. scene iii. of *L'École des Femmes*.

'that if Augustus, the emperor of the world, had deemed me worthy of his hand, and would have given me the universe for a throne, the name of your concubine would have been more glorious to me than that of his empress: *carius mihi et dignius videretur tua dici meretrix quam illius imperatrix.*'

Gladly would Abelard have profited by this sublime passion; but he was a coward, and his heart trembled before Fulbert. He therefore endeavoured to answer her arguments; and she, finding that his resolution was fixed—a resolution which he very characteristically calls a bit of stupidity, *meam stultitiam*—burst into tears, and consented to the marriage, which was performed with all secrecy. Fulbert and his servants, however, in violation of their oath, divulged the secret. Whereupon Heloise boldly denied that she was married. The scandal became great; but she persisted in her denials, and Fulbert drove her from the house with reproaches. Abelard removed her to the nunnery of Argenteuil, where she assumed the monastic dress, though without taking the veil. Abelard furtively visited her.* Meanwhile Fulbert's suspicions were roused, lest this seclusion in the nunnery should be but the first step to her taking the veil, and so ridding Abelard of all impediment. Those were violent and brutal times, but the vengeance of Fulbert startled even the Paris of those days with horror. With his friends and accomplices he surprised Abelard sleeping, and there inflicted that atrocious mutilation, which Origen in a moment of religious frenzy inflicted on himself.

In shame and anguish Abelard sought the refuge of a cloister. He became a monk. But the intense selfishness of the man would not permit him to renounce the world without also forcing Heloise to renounce it. Obedient to his commands, she took the veil; thus once again sacrificing herself to him whom she had accepted as a husband with unselfish regret, and whom she abandoned in trembling, to

* He adds, '*Nosti . . . quid ibi tecum mea libidinis egerit intemperantia in quadam etiam parte ipsius refectorii. Nosti id impudentissimè tunc actum esse in tam reverendo loco et summæ Virgini consecrato.*'—*Epist.* v. p. 69.

devote herself henceforth without hope, without faith, without love, to her divine husband.

The gates of the convent closed for ever on that noble woman whose story continues one of pure heroism to the last; but we cannot pause to narrate it here. With her disappearance, the great interest in Abelard disappears; we shall not therefore detail the various episodes of his subsequent career, taken up for the most part with quarrels—first with the monks, whose dissoluteness he reproved, next with theologians, whose hatred he roused by the ‘heresy’ of reasoning. He was condemned publicly to retract; he was persecuted as a heretic; he had ventured to introduce Rationalism,—or the explanation of the dogmas of faith by Reason,—and he suffered, as men always suffer for novelties of doctrine. He founded the convent of Paraclete, of which Heloise was the first abbess, and on the 21st of April, 1142, he expired, aged sixty-three. ‘Il vécut dans l’angoisse et mourut dans l’humiliation,’ says M. de Rémusat, ‘mais il eut de la gloire et il fut aimé.’

There are two points of view under which the teachings of Abelard are of interest to us. The first is his attempt to emancipate Reason; the second his attempt to disengage the doctrine of Nominalism from the heretical disgrace under which it had fallen in the hands of Roscellinus.

Carrying out more boldly and more effectively the principle started by Erigena, he brought forward Logic as an independent power in the great arena of theological debate. *Ponit in cœlum os suum*, says St. Bernard, with indignation, writing to the Pope, *et scrutatur alta Dei*. It was a dangerous and damnable imprudence; and drew on him from St. Bernard this terrible accusation: *transgreditur fines quos posuerunt patres nostri*; to have passed beyond the limits set by our forefathers is, in all ages and in all nations, to have braved the reprobation of the timid and the old. Abelard braved it.

Supported, as he thought, by thousands of partisans, Abelard assumed an attitude of offence, almost of disdain.

Unconscious of his real danger, he published the substance of his Lectures in a work called *Introductio ad Theologiam*, in which he undertook to demonstrate by Reason the dogmas of Faith, and promulgated the then audacious opinion, that all dogmas should be presented under a rational form. That this was very far from being acceptable, may be read not only in his condemnation, but also in the passage of his *Dialectica*, where he says that his rivals declared it not permissible in a Christian to treat even of Dialectics, because Dialectics was not only incapable of instructing any one in the faith, but disturbed and destroyed faith by the complication of its arguments.*

This commencement, feeble though it may have been, marks a new epoch in the development of speculation. The struggle of Reason against Authority, which was reopened by Abelard, has not yet closed. ‘My disciples,’ he says in his Introduction, ‘asked me for arguments drawn from philosophy such as reason demanded, begging me to instruct them that they might understand and not merely repeat what was taught them; since no one can believe anything until he has first understood it; and it is ridiculous to preach to others what neither teacher nor pupil understand.’

Not content with this revolutionary principle, Abelard further ‘transgressed the limits of his forefathers’ by the composition of the treatise *Sic et Non*,† the object of which was to cite the passages of Scripture and the Fathers *pro* and *con.* upon every important topic: this collocation of contradictory statements given by the highest possible authorities was meant, as Abelard distinctly informs us, to train the mind to vigorous and healthy doubt, in fulfilment of the injunction, ‘Seek, and ye shall find; knock, and it shall be opened unto you.’ ‘Dubitando enim ad inquisitionem venimus; inquirendo veritatem percipimus; juxta

* *Dialectica*, p. 434.

† It is printed in Cousin’s edition, but with omissions. The entire work was published in Germany, 1841, under this title: *Petri Abaelardi Sic et Non; primum integrum ediderunt E. L. Henke et G. S. Lindenköhl.*

quod et Veritas ipsa *Quærite*, inquit, *invenietis; pulsate, et aperietur vobis.** Whatever his intention may have been, the result of such a work was clearly foreseen by theological teachers, who regarded doubt as damnable, and would not tolerate it under the plausible aspects of intellectual gymnastics, or the love of seeking for truth. But theologians were unable to arrest the development of speculation. Doubt began; disputation waxed stronger; logic played like lambent flame around the most sacred subjects; Scholasticism entered every city in Europe, and filled it with subtle disputants.

During the centuries which succeeded, the question of Nominalism was constantly in debate; and beside it many others so remote, and, to modern apprehensions, so frivolous, that few historians boast of more than superficial acquaintance with mediæval philosophy, and few mention it without scorn. To name but one topic, what does the reader think of a debate *utrum Deus intelligat omnia alia a se per ideas eorum, an aliter?* What does he think of men wasting their energies in trying to convince each other of the true process by which God conceived ideas—discussing, with ardour and unmisgiving ingenuity, topics which are necessarily beyond all possible demonstration? Nevertheless, absurd as such discussions were, they have found, even in modern times, legitimate successors; and the laborious futility of the Schoolmen has been rivalled by the laborious futility of the German metaphysicians.

§ IV. THE GREAT DISPUTE.

The second point to which Abelard calls our attention, is the dispute which agitated the schools during the whole Middle Ages, the dispute as to the nature of Genera and Species, which M. Rémusat truly says is the longest, most animated, and certainly the most abstract controversy, that has ever agitated the human mind, and the one which now

* Page 17 of the edition last named.

seems the least likely to have interested men so deeply. The secret of this interest is the theological bearing which the question early received. It had been debated in Greece as an abstract question. It was now debated as one deeply implicating the dogmas of Faith.

M. Cousin is guilty of but a slight exaggeration, when he says that the whole Scholastic Philosophy issued out of a phrase in Porphyry, as interpreted by Boethius. This is the passage in Boethius: 'The object of Porphyry in this work, is to prepare the mind for the easy understanding of the Predicaments, by treating of the five things or words (*tractando de quinque rebus vel vocibus*), namely, genus, species, difference, property and accident; the knowledge of which leads to the knowledge of the Predicaments.' By the phrase *rebus vel vocibus*, he was understood to signify that things and words were mutually convertible, to discourse of one was to discourse of the other. But is this so? Does the word Genus, or the word Species, represent an actual something which exists objectively, or is it merely a name which designates a certain collection of individual things? Centuries had passed without any one perceiving more than a grammatical or logical importance in the alternative. 'On ne l'entrevit guère qu'au milieu du onzième siècle. Mais à peine livré à l'examen les deux solutions contraires qu'il présentait se partagèrent les esprits; et bientôt, agité en tous sens et fécondé à la fois par la témérité et par la sagesse, il en sortit à la fin du onzième siècle, et surtout au commencement du douzième, la philosophie scolastique dans toute son originalité et sa grandeur.'*

Roscellinus, whose name has descended to us as the first advocate and martyr of Nominalism, but of whose opinions we have only the reports of adversaries, may have held the extreme opinion, which is attributed to him, namely, that Universals were only names; he certainly denied their objective existence, denied that there existed a thing 'colour,'

* COUSIN: *Œuvres Inédites d'Abélard: Introd.*

apart from coloured things, a thing, 'animal,' apart from animals, and denied that there was any real existence which was not an individual. When I say that Roscellinus may have held the opinion attributed to him, I wish to be understood as speaking doubtfully, because although it seems almost inconceivable that an acute mind could believe in so crude an opinion, which implies that names are mere breath, *flatus vocis*, and not also signs of ideas; and this difficulty is heightened by the fact that we have not his words whereby to judge him, but only the language adversaries put into his mouth; nevertheless, the history of Philosophy abounds in instances of even acute minds being thoroughly subjugated by verbal distinctions, and it is quite possible that Roscellinus, in seeing the error of Realism, saw nothing more than names in general terms, and overlooked the fact that these names stood for general ideas. Unless he did overlook this, the modification of Nominalism which Abelard introduced, and which has since been known as the third opinion on the question, and named Conceptualism (a purely verbal modification), is a mere subterfuge.

Those who believed with Plato, that general terms had correspondent objective existence, might have more readily listened to the Aristotelian refutation, and the more willingly acquiesced in the logic of Roscellinus, which reduced general terms to mere names, had there not been a vista of heresy in this argument. Roscellinus, with unhesitating logic, showed that the three persons of the Trinity were incompatible with the unity of real existences: either the three persons existed separately and individually, and were one only in name, having a common resemblance of nature; or else the three persons form but one God; in which case God exists alone, without distinction of persons.

That such a conclusion should startle the world, and call forth the thunders of the Church, will surprise no one. Roscellinus was summoned to appear before the council, and publicly abjure his errors (1093). He did so; not convinced that they were errors, but convinced that the people of Reims

thought so, and thinking so were ready to massacre him. 'Telle était alors l'énergie de la foi chez les simples,' says M. Hauréau, 'tel était le discrédit populaire de la raison!' But surely a logical process, which carried men to such unpleasant conclusions, would always have been in discredit? Men were not willing to give up their dogma of the Trinity; and any logic which called upon them to do so would be answered with brick-bats. If Roscellinus persuaded a few hardy thinkers to adopt his opinion, they prudently kept silent; and that pleasant writer, John of Salisbury, alluding to it some years afterwards adds, 'sed eorum jam explosa sententia est, et faciliè cum auctore suo evanuit.*' Realism was again ascendant. It had an imperfect foundation in logic, but it was, or seemed to be, favorable to the Trinity, and that consecrated it.

The first great adversary of Roscellinus was Anselm of Canterbury, whose works have already been mentioned. His treatise *de Fide Trinitatis* is directed against Nominalism, and his arguments have satisfied many moderns; they have moreover given M. Cousin an opportunity of displaying that rhetorical clap-trap which so often makes his writings odious.†

The next great Realist was William of Champeaux, and against him, as we have seen, arose Abelard; not indeed to defend Roscellinus and his heretical Nominalism; on the contrary, to disavow and refute him, but to replace the two opinions by a third. He adopted so much of Nominalism, that until recently he was always held (and I think justly

* JOANNES SARISBERIENSIS: *Polycraticus*, vii. 12. Comp. his *Metalogicus*, ii. 17. *Opera Omnia*, ed. GILES, Oxon. 1848.

† 'Ainsi le genre humain n'est pas un mot, ou bien il faut prétendre qu'il n'y a réellement rien de commun et d'identique dans tous les hommes, que la fraternité et l'égalité de la famille humaine sont de pures abstractions, et que, la seule réalité étant l'individualité, la seule réalité est par conséquent la différence, c'est-à-dire, (what logic!) l'inimitié et la guerre, sans autre droit que la force, sans autre devoir que l'intérêt, sans autre remède que la tyrannie; tristes mais nécessaires conséquences que la logique et l'histoire imposent au nominalisme et à l'empirisme, et qui soulèvent contre eux, avec le christianisme, le sens commun et la conscience du genre humain.' COUSIN: *Fragments de Philos. du Moyen Age*, 1856, p. 117. The imbecility of this passage is artfully concealed in its rhetorical assumptions; but it is so characteristic of the writer (who has nevertheless done much for the history of philosophy) that I could not forbear citing it, for the sake of marking my disgust.

held) to be a Nominalist. Buhle points out that Abelard is a Nominalist when combating William, and a Realist when attacking Roscellinus.* M. Rousselot argues at great length that Abelard was in truth a Realist;† that as a logician he agreed with Roscellinus, reducing universals to general terms, but as a metaphysician he agreed with the Realists. A closer examination of the arguments, however, shows that Abelard was a Nominalist under a new name.

The peculiarity of his doctrine consists in the distinction of Matter and Form applied to genus and species. 'Every individual,' he says, in a very explicit passage of the treatise *De Generibus et Speciebus*, printed by M. Cousin, 'is composed of matter and form, i.e. Socrates from the matter of Man, and the form of Socratism; so Plato is of the same matter, namely, that of man, but of different form, namely, that of Platonity; and so of all other individual men. And just as the Socratism which formally constitutes Socrates is nowhere but in Socrates, so the essence of man which sustains Socratism in Socrates, is nowhere but in Socrates. The same of all other individuals. By species, therefore, I mean, not that essence of man which alone is in Socrates, or in any other individual, but the whole collection which is formed of all the individuals of the same nature. This whole collection, although essentially multiple, by the Authorities is named one Species, one Universal, one Nature; just as a nation, although composed of many persons, is called one. Thus each particular essence of the collection called Humanity is composed of matter and form, namely, the animal is matter, the form is, however, not one, but many, i.e. rationality, morality, bipedality, and all the other substantial attributes. And that which is said of man, namely, that the part of man which sustains Socratism is not essentially the part which sustains Platonity, is true also of the Animal.‡ For the Animal which in me is

* BUHLE, *Gesch. der neuern Phil.* I. 840.

† ROUSSELOT, *Études sur la Philosophie dans le Moyen Age*, 1840, II. 33, sq.

‡ We must subjoin the original: 'Et sicut de homine dictum est, scilicet quod illud hominis quod sustinet Socratitatem, illud essentialiter non sustinet Platonitatem,

the form of Humanity, cannot essentially be elsewhere; but there is in it something not different from the separate elements of individual animals. Hence, I call Genus the multitude of animal essences which sustain the individual species of Animal: the multitude diversified by that which forms Species. For this latter is only composed by a collection of essences which sustain individual forms; Genus, on the contrary, is composed by a collection of the substantial differences of different Species. . . . The particular essence which forms the Genus Animal, results from a certain matter, essence of body, and substantial forms, animation and sensibility, which can only exist essentially there, although they take indifferently the forms of all species of body. This union of essences produces the Universal named Animal Nature.*

From this passage, and many others to the same effect might be cited, it is clear that if Nominalism be understood as proclaiming Universals to be only general names, *flatus vocis*, and not also general conceptions based on something real, expressing the resemblances and relations of things—an interpretation it is difficult to accept—Abelard separated himself from the Nominalists, and maintained the existence of universals *post rem*, though not *ante rem* and not *in se*—as when a multitude is conceived under the form of unity linking together the resemblances existing between the individuals composing it. But this reality of conceptions, which is the point advanced in Conceptualism, though it sometimes looks like the doctrine of Realism, and enabled Abelard to use equivocal language which has misled even M. Rousselot, is such as every Nominalist may accept. Abelard maintains that Genus and Species are not general existences, objectively real, existing integrally in various individuals whose identity admitted of no other diversity than that of modes or accidents; otherwise the subject of

tatem, ita de animali. Nam illud animal quod formam humanitatis quæ in me est, sustinet, illud essentialiter alibi non est, sed illi non differens est et singulis materiis singulorum individuorum animalis.'

* *De Generibus et Speciebus*, p. 524.

these accidents, the substance of these modes being identical, every individual would possess the same substance. Humanity would thus only be one man; Socrates being at Athens, Humanity would be at Athens; and Plato being at Thebes, Humanity would then either not be at Athens with Socrates, or Plato would not be a man.

M. Hauréau* seems to me correct in saying that when Abelard appears to be defending Realism against Roscellinus, it is merely on the surface; he does not think what he seems to say; nothing is more repugnant to him than that doctrine; but Nominalism having an ill name, he has to advance cautiously. All that he really advances against Roscellinus is that Genus and Species are more than words, words being signs of conceptions. How these conceptions are formed by abstraction is very explicitly stated in his treatise *De Intellectibus*.† It is true that to give an air of independence to his position, and protect himself against the accusation of Nominalism, he stoutly affirms that words are nothing, whereas Genus and Species are things, substances. But what things?—what substances? ‘Il est trop ami de l'équivoque,’ says M. Hauréau, ‘pour s'expliquer davantage à ce sujet quand rien ne l'exige.’

In spite of the equivocal, or rather in consequence of it, Conceptualism, which was Nominalism under a new name, found great favour: the more so when men discovered that if Nominalism led to heretical views of the Trinity, Realism necessarily led to Pantheism, or the identification of all substances in one substance. But the battle continued to rage with varying fortunes throughout the Middle Ages, and the Church in turn condemned both. Nominalism was repeatedly dragged before the councils and condemned. Realism also was found to shelter monstrous heresies. In endeavouring to prove the existence of God, the school of Anselm was found almost to have denied that existence, to have merged it in Pantheism. ‘Et si l'on ne se hâte de fermer

* HAURÉAU: *De la Philos. Scholastique*, I. 281.

† Printed by M. COUSIN in his *Fragments Philos.* Comp. RÉMUSAT: *Abélard*, I. 495, and HAURÉAU, I. 283.

les chaires où sont développées de telles conclusions, c'en est fait de tout dogme, la morale chrétienne n'a plus elle-même de fondement, et la plus abhorrée de toutes les hérésies, celle qui eut pour auteurs les plus mal famés des gnostiques, triomphe au douzième siècle de l'église et de la foi! Les buchers s'allument pour recevoir ces audacieux interprètes de la formule réaliste.*

At the close of the XIIth century liberty of thought seemed vanquished. All the philosophical schools had in turn been condemned as heretical; and each was eager to secure the condemnation of the other. Disgusted with their quarrels, with the futility of their principles, a party arose which turned the sharp edge of logic against them all and proclaimed the vanity of rational research. Of these an excellent representative may be seen in John of Salisbury, who lashes the logical follies of the age with a vigour which makes him interesting to our own age.† He refused to admit that idle disputes about words, and debates about generals and particulars, were philosophy at all. In his treatise, *Polycraticus*, he appeals to the nobler philosophy of Christian moralists against this vain array of logical formulas; he objects to the deductive method so strikingly exhibited by Anselm, and so destructively employed by Anselm's followers. And the Church applauded him. In fact, the struggles of the schools seemed about to end, as many other anarchical efforts have ended, in universal despotism. That which prevented so fatal a consummation, that which once more introduced the ferment of philosophic speculation into Europe, was the agitating influence of the Arabian commentators on Greek philosophy and science.

* HAURÉAU, I. 215.

† JOANNES SARISBERIENSIS: *Metaphisicus*, pp. 69, 73, 75, 77, ed. GILES. I have only room for one sentence: ‘Fiunt itaque in puerilibus Academici senes; omnem dictorum aut scriptorum excutunt syllabam, imo et literam; dubitantes ad omnia, quærentes semper, sed nunquam ad scientiam pervenientes; et tandem convertuntur ad vaniloquium, ac nescientes quid loquantur, aut de quibus asserant, errores condunt novos, et antiquorum aut nesciunt aut dedignantur sententias imitari. Compilant omnium opiniones, et ea quæ etiam a vilissimis dicta vel scripta sunt, ab inopia judicii scribunt et referunt: proponunt enim omnia quia nesciunt præferre meliora.’

CHAPTER II.

ARABIAN PHILOSOPHY.

THE part due to Arabian influence in determining the evolution of European thought, giving a peculiar direction to culture which was in danger of languishing under the repressive despotism of Theology, is important, and not generally recognised; we are interested, therefore, in what savants tell us about these Arabian writers, especially of their leading tendencies. I will here rapidly set down the results of my own inquiries in this direction, giving references to sources where the curious reader will find ampler detail.

It is a common error to confound Mahommedan with Arabian, and then to feel surprise at the rapid transformation of an ignorant nomadic people, such as the Arabs were, into the splendid nation whose culture gave a mighty impulse to European progress. Even the learned Dozy seems to countenance this error when he says of the Arabs 'arrachés par un prophète à leur déserts et lancés par lui à la conquête du monde, ils l'ont rempli du bruit de leurs exploits; enrichis par les dépouilles de vingt provinces ils ont appris à connaître les jouissances du luxe; par suite du contact avec les peuples qu'ils ont vaincus ils ont cultivé les sciences, et ils se sont civilisés autant que cela leur était possible. Cependant même après Mahomet une période assez longue s'est écoulée avant qu'ils perdissent leur caractère national.'* Barbarians they were, and barbarians they long remained, in spite of their conquests.

* Dozy: *Histoire des Musulmans d'Espagne*. Leyden, 1861, i. 15.

There never was any Arabian Science, strictly speaking. In the first place, all the Philosophy and Science of the Mohammedans was Greek, Jewish, and Persian. In the next place, it was never, or very rarely, the Arabs who devoted themselves to such studies. One authority* has told us that what it is customary to call Arabian Philosophy forms but a small section of the Mohammedan movement, and was almost unknown even to the Mohammedans themselves. It really designates a reaction against Islamism, which arose in the distant parts of the empire, in Samarcand, Bokhara, Morocco, and Cordova. The Arabian language having become the language of the empire, this Philosophy is written in that language; but the ideas are not Arabian; the spirit is not Arabian. The real genius of that people is to be found in the Moallakat and the Koran; and is absolutely antagonistic to Grecian Philosophy. It is the genius of a Semitic race. That race has been moved to lyrical and prophetic expression, rarely to the severe abstractions of Science, or the delicate subtleties of Philosophy. None of the great names, except Al-Kendi, belong to Arabs, strictly so called. They are the names of Persians, Spaniards, and Jews. It was through the Persians, under the Abbassides, that Grecian thought was introduced into Islam. It was at Bagdad that Philosophy formed a home. The caliph, Al Mamoun, a representative of the Persian reaction, was its first great patron; Syrian Christians and the Magi were its promoters.

When the edict of Justinian drove the last of the Greek philosophers to seek a refuge in Asia, they found welcome in Persia. The Nestorians flying from Heraclius found hospitable protection under Kosroes. And thus it was, that when the Abbassides wished to illustrate their dynasty with the splendour of Letters, they found numerous Greeks, Christians, and Jews ready to aid them with Syriac and Arabian versions of the great Athenian and Alexandrian writers.†

No one doubts that the origin of Arabian Philosophy and

* ERNEST RENAN: *Averroës et l'Averroïsme*. Paris, 1852, p. 67.

† Compare MUNK: *Mélanges de Philosophie Juive et Arabe*. Paris, 1859, p. 313.

of European Scholasticism must be sought in the Alexandrian School, more particularly in the peripatetic modification impressed on that School by its later thinkers. Porphyry is more Aristotelian than Platonic; and Porphyry was regarded, both by East and West, as the representative of philosophic thought. The absolute dominion which for ten centuries was exercised by Aristotelianism was greatly indebted to the labours of the Alexandrian interpreters, Ammonius, Themistius, Syrianus, Simplicius, and Philoponus; and it was to them that Arabian Philosophy owed its material. The little that the Arabs knew of Plato—and it was very little—they gained through these peripatetic commentators. Few of Plato's works, according to Munk, were translated into Arabic, and the few versions that existed were not widely known. I find that Djemâl Eddin al Kifti, who in the thirteenth century wrote a 'Dictionary of Philosophers,' mentions, under the head of Plato, only the translations of the *Republic*, the *Laws*, and the *Timæus*; but he also, under the head of Socrates, cites passages from the *Crito* and *Phædo*.

That the Arabs attached themselves servilely to Aristotle, and paid little attention to Plato, is well known. The reasons usually deduced for this preference are, as Renan justly remarks, more plausible than solid. It was not owing to their more practical turn of mind; it was not owing to their more scientific disposition. It was not even *preference* at all: there could be no preference where there was no alternative for choice. The Arabs accepted the culture which was offered them; and Plato was *not* offered. Even Plotinus, whose views they liberally incorporated with their philosophy, is never mentioned by them.*

The Syriac versions of Aristotle, commenced in the days of Justinian, were rapidly multiplied by translations into Arabic. In the ninth century the Nestorian physicians, Isaak and his son, gave translations which were much renowned. In the tenth century, Ya'hya ben 'Adi and 'Isa ben Zara

* See MUNK, p. 240. RENAN, p. 71.

made new translations, and corrected those already extant. Some of these, according to Munk, are executed with remarkable care and accuracy. The debt which Europe owes to the Arabs for their preservation of Greek writings, and the stimulus impressed upon European curiosity by the ardour of their veneration, without which stimulus the Renaissance might never have come to pass, has long been recognised, and perhaps exaggerated. Another and less questionable debt is due to them for the ardour with which they prosecuted mathematical, astronomical, medical, and chemical studies. Alexandria produced not simply philosophers, but also men of science; and the Arabs were brought into contact with both, learning to venerate Ptolemy and Galen as well as Aristotle. Thus, if the Arabs helped to raise Aristotle on the despot's throne, they also furnished the irresistible weapons with which that throne was one day to be destroyed.

The aspect of learning in Christian Europe during the tenth century was piteous. Yet at that very period of darkness, Andalusia, under the Mohammedans, was the centre of light. It was the market where all the treasures of the East found ready sale; works composed in Persia and Syria were often known in Spain before they had been heard of in the East. The caliph had his agents at Cairo, Bagdad, Damascus, and Alexandria, all seeking for manuscripts.

It is to be borne in mind that the Arabs, although they conquered Spain, were too weak in numbers to hold that country in subjection otherwise than by politic concessions to the opinions and customs of the people. They were in a position not unlike that of the Normans in England: superior in military organization, but inferior in actual strength, and forced to respect their subjects. Hence they permitted Jews and Christians to retain their religious rites and daily customs. So successful was this policy of conciliation, that Christians and Mohammedans not only lived together amicably, but often intermarried. And it is worthy of note, that from Spain Arabian culture slowly penetrated Europe,

through France, by means of the wandering and adventurous Jews.

Andalusia in the tenth century is thus a star shining solitary amid the darkness. The passion for Science and Art had established there a toleration which seems surprising to moderns. Christians, Jews, and Mussulmans spoke the same language, sang the same songs, delighted in the same poems, thought the same thoughts. It is obvious that this toleration, and this passion for knowledge which could only be general where such toleration existed, are quite irreconcilable with the commonly received opinion of Mohammedan bigotry. The truth must be avowed; there is almost always something of indifference in toleration. Without moral indifference, or intellectual scepticism, impartiality is difficult. Very earnest belief is confident, and the confidence in truth brings intolerance of error. Culture must weaken the intensity of religious conviction, before it widens the capacity of religious emotion so far as to admit the possibility of another opinion being true, or of an erroneous opinion being without offence in the eye of Heaven. A sweetly serious and hopeful nature may believe that error is not sin; but it is only exceptional minds that can be at once fervent and tolerant. If therefore we find any section of the world of Islam tolerant, we may safely conclude that it was sceptical or indifferent. Now M. Renan has shown* that even in Mahomet's time there was little belief in the prophet except among a small circle of devoted followers; and that it was not until the twelfth century that Islamism finally triumphed over the undisciplined elements which had split it into sects, some of them almost openly avowing their infidelity; 'sectes secrètes à double attente, alliant le fanatisme à l'incrédulité, la licence à l'enthousiasme religieux.' Indeed, the Arab is said by those who have studied his character not to be of a religious disposition, and in this he differed greatly from the other races that have adopted Islamism. 'Voyez les Bédouins

* RENAN: *Études d'histoire religieuse*, 3rd ed. Paris, 1858, pp. 257-266.

d'aujourd'hui,' says Dozy. 'Quoique musulmans de nom ils se soucient médiocrement des préceptes de l'Islamisme. Le voyageur européen qui les a connus le mieux atteste que c'est le peuple le plus tolérant de l'Asie.'* More than a century after Mahomet the Arabs in Egypt were ignorant of what the prophet had forbidden.† The religious fanaticism of Mohammedanism, which has aspects resembling our Puritanism, is traced by Dozy to the Berbers.

As Arabian Philosophy is nothing more than the Alexandrian interpretation of Aristotle, with occasional Oriental coloring, I shall not pause to expound the doctrines at any length; I am more desirous of indicating the kind and degree of scientific culture which was at one period so powerful in its influence on European thought. The readiest way of indicating this will be to bring forward the most eminent of the Arabian teachers.

§ I. AL-KENDI.

Our list opens with Al-Kendi, who flourished in the ninth century. He was the son of the governor of Coufa, under Haroun Al-Raschid. He studied at Bagdad and Bassora; and became famous, under the caliphs Al-Mamoun and Al-Mo'tacem, for works on philosophy, astronomy, mathematics, medicine, politics, and music. Learned in the learning of Persians, Indians, and Greeks, he was selected by the caliph as the man to translate Aristotle. Al-Kendi's commentaries on the Stagirite are rarely cited by Arab writers; and hence we may conclude they had been greatly surpassed by succeeding commentators.

In the detached notices which reach us of these Arabian thinkers, we often seem to meet with opinions greatly in advance of the culture of the time. But it would be necessary to have much more circumstantial statements before we could rely on such inferences, a verbal agreement often

* Dozy: *Op. cit.* I. 20.

† *Ibid.* p. 37.

masking profound divergences of thought. When, for example, we hear of Al-Kendi having composed a treatise to show that Philosophy was based on Mathematics, and could not be understood without Mathematics, we seem to read an agreement with the most advanced school of modern thinkers; yet, if we had Al-Kendi's work before us, we should probably find that his view of the relation of Mathematics to Philosophy was altogether unlike the modern. Roger Bacon, a disciple of the Arabs, also insisted on the primary necessity of Mathematics,* without which no other science can be known; yet by Mathematics it is clear that he meant something very different from what we mean, including under that head even dancing, singing, gesticulation, and performance on musical instruments.

§ II. AL-FARABI.

It was probably with no clearer insight that Al-Farabi treated Mathematics, gaining great celebrity. He was also famous as a physician (all the Arabs seem to have made Medicine a favourite study) and as a commentator on Aristotle. The date of his death—December, 950—seems all that can positively be fixed. Of his life, all that is authentically known is that he studied at Bagdad, and lived at Aleppo and Damascus. The details to be found in Leo Africanus and Brucker are rejected by Munk as untrustworthy. The chief of his writings were commentaries on Aristotle, especially on the *Organon*. And these we often meet with in citation. Roger Bacon and Albertus Magnus repeatedly quote them. Avicenna also avows himself greatly indebted to them; and so great were his obligations, that readers gradually ceased to seek in Al-Farabi what they could find in Avicenna.

Among the works of Al-Farabi there was one on the Philosophy of Plato and Aristotle, of which some descriptions

* ROGER BACON: *Opus Majus*, Venet. 1750, p. 43, and *Opera Inedita*, ed. BREWER, 1859, I. 105.

by Arabian writers still remain. It implied a knowledge of Plato greater than is found in other writers of that period. It contained an exposition of the various branches of philosophy and their mutual relations, an analysis of Plato's doctrine, with an indication of his works. This was followed by a more detailed account of Aristotle, with brief summaries of each of his treatises.

Al-Farabi's works on Music are said to have been greatly in advance of what had appeared before his time. One of them contained a complete theory of the art, treating of sounds, concords, intervals, rhythms, and cadence. In another he expounded the writings of the ancients, showing what progress had been made, correcting the errors of each writer, and supplying his omissions. Al-Farabi refuted the Pythagorean notion of music of the spheres. He also explained the influence of vibrations of the air upon instruments, and how the instruments ought to be constructed.*

§ III. AVICENNA.

Far more illustrious than any who had preceded him, Avicenna, or to give him his real title (Abou-'Ali al'Hosein ben-'Abd-Allah Ibn Sîna), was born in one of the cities of Bokhara in August, 980. His family was Persian. At an early age he knew the Koran by heart, and was not a little admired for his precocity, especially in the studies of grammar and jurisprudence. To these he soon added mathematics, physics, logic, and metaphysics. Medicine followed, of course; and so marvellous was his precocity, that at the age of 17 he was appointed medical adviser to the Emir Nou'h-ben Mansour, whom he cured of a serious malady.

* None of the important works of Al-Farabi have been translated. The little volume published at Paris in 1638—*Alpharabii, vetustissimi Aristotelis interpretis, opera omnia quæ latina lingua conscripta reperiri potuerunt*—contains only two essays, I. *De Scientiis* (a sort of programme of the sciences), II. *De intellectu et intellecto*. Two other essays in the original, with Latin versions, were published by SCHMÖLDERS: *Documenta Philosophiæ Arabum*. Bonn, 1836.

The immense library of the emir was thus opened to his research. So eager and so ardent was his devotion to study, that he was accused of having set fire to the library, jealous lest another should share with him the knowledge he had gained there. An idle story.

After the death of his protector the emir, Avicenna quitted Bokhara, and extended his knowledge and his fame by visiting several great cities. He then composed his *Medical Canon*, which for centuries was the text-book of European schools, and is the one work by which he is known beyond his own country. He was soon again a wanderer. At Hamadan the emir raised him to the post of vizir. But the priests were offended, and instigated the soldiery to revolt. Avicenna was made prisoner, and his life was in danger. After some time spent in concealment, he was again able to reappear at court, and attend on the sick prince. It was at this period he composed his chief philosophical work, *Al-schefâ* (which means *The Cure*; the Latin title is misleading).^{*} And every evening he lectured on philosophy and medicine to a large and attentive audience. The lecture over, he ordered musicians to appear; and being of a festive disposition, fonder of the pleasures of the table than became a philosopher and physician, he rapidly undermined a constitution already enfeebled by over study. Avicenna was fond of wine, and on being reproached for his defiance of the Koran, replied, 'Wine is forbidden because it excites quarrels and bad passions; but I, being preserved from such excesses by my philosophy, drink wine to sharpen my intellect.'

It was a troubled life our philosopher led, crowded with excitement of various kinds. He was not content with lecturing and wine-bibbing, but must also take to conspiring. Thrown into prison, he escaped to Ispahan, where he found a new patron, with whom he passed a few years of toil and

^{*} 'De his voluminibus,' says ROGER BACON, 'duo non sunt translata; primum autem et secundum aliquas partes habent Latini quod vocatur *Assephæ*, i.e. Liber Sufficientiæ.—*Opus Tertium*.

excitement, which terminated in 1037, in the fifty-seventh year of his age.

The immense productivity of the ancient philosophers is one of their most striking characteristics. Avicenna, whose brief career was also a troubled one, found time to be as voluminous as a Benedictine. Learned in all the learning of his time (which however was easily compassed), he composed more than a hundred works, some of which still survive.*

In the eleventh century he was to the Mohammedans of the East what, in the twelfth century, Averroes was to the Mohammedans of the West, and what Albertus Magnus was to Europe in the thirteenth century. Indeed, it is very probable, as M. Jourdain suggests,† that Albertus borrowed the plan of his own vast labours from Avicenna, who was not so much a translator or commentator of Aristotle, as the popularizer and propagator of his ideas. Like Albertus, he composed treatises on all the subjects treated by the Stagirite, often reproducing the expressions as well as the ideas of his model, but not unfrequently deviating into new tracks, either because he had misinterpreted the original, or because his own wider knowledge and clearer thought enabled him to improve it.‡ His least questionable improvements were in psychology. It is to Avicenna that the Arabs, and after them the Schoolmen, owe the classification of the faculties into exterior (the five senses), interior, motor, and rational.

The immense and enduring success of Avicenna's *Medical Canon* is a significant fact, when we reflect that he had not advanced the science in any one direction beyond the point

^{*} A Latin version, published at Venice in 1495, under this title—*Avicennæ, peripatetici philosophi ac medicorum facile primi, opera in lucem redacta ac nuper quantum ars niti potuit, per canonicos emendata*—contains *Logica*, *Sufficientia* (or, as we should style it, *Physica*), *De Cælo et Mundo*, *De Animâ*, *De Animalibus*, *De Intelligentis*, *Alpharabius de Intelligentis*, and *Philosophia Prima*.

† JOURDAIN: *Recherches sur les anciennes traductions latines d'Aristote*. Paris, 1843, p. 209.

‡ 'Princeps magnus, qui semper in libris sapientiæ vocatur princeps Abholati, ipse iterum revocavit philosophiam in Arabico, et exposuit opera antiquorum.' ROGER BACON: *Opus Tertium*, cviii. p. 24.

it had reached among the Greeks. Nay, in some respects it was even less advanced, for it servilely followed Aristotle in preference to Galen, and this, too, in simple matters of fact within easy verification; such, for example, as in assigning only three chambers to the heart. The Arabs could have no scientific pre-eminence over the Greek physicians, for they were by Mohammedan prejudices forbidden to practise human anatomy; and consequently physiology inevitably became a mere display of teleological ingenuity.

Sprenzel asks how it is that the *Canon* came to secure and preserve its unquestioned supremacy in European schools, not being really superior to other Arabian works on the same subject. He finds an explanation in the systematic completeness of the work, and the indolent servility of the public, which was flattered by that cut-and-dried wisdom. 'These men,' he says, 'disliked novelties; accustomed in religious matters to obey without scruple the infallible dicta of the Church, it was agreeable to them to have an infallible authority in matters of science.*' Authority has always had great weight in Medicine; and the reason is because positive science plays so small a part in it. Where men cannot appeal to proofs, they must fall back on precedents; where they lack reasons there they quote authorities. Avicenna gratified the disposition to accept authority, and gratified the indolence which shrinks from laborious research. His dicta rendered research superfluous. Men were little given to independent thought in those days, when Science meant the knowledge of what other men had thought. The *Canon* contained the chief thoughts of Greek and Arabic sages; and men were thus saved even from the labours of erudition; for why should they have sought in the originals what this compendium so conveniently placed within easy reach? It was not until they began to think of interrogating Nature, instead of echoing the sages, that Avicenna's supremacy was disputed. And so naturally servile is the human intellect, so reluctantly does it withhold allegiance from a name which has once held

* SPRENGEL: *Gesch. der Arzneikunde*. Halle, 1823, II. 424.

authority, that even late in the sixteenth century we find Scaliger asserting that no man could be an accomplished physician who had not mastered Avicenna.

Following a chronological order, two names ought to be interposed here, Avicbron and Algazzali; but for purposes of exposition, I withhold these till a subsequent page, Algazzali being better understood in connection with Averroes, and Avicbron conducting us back to the scholastics.

§ IV. AL-HAZEN.

Al-Hazen ('Abou 'Ali al'Hasan ben al-'Hazen) was really a distinguished mathematician, who flourished during the early part of the eleventh century. He is best known in Europe by his treatise on *Optics*, translated by Risner, and published at Bâle in 1572. He therein corrected the Greeks, who supposed that rays of light issue from the eye and impinge on the objects; by anatomical and geometrical arguments, he shows that the rays come from the objects and impinge on the retina. He further explained the fact, that we see objects singly, though with two eyes, because the visual images are formed on symmetrical portions of the two retinas. He explains reflection and refraction; and astonishes us with his knowledge that the atmosphere increases in density as it decreases in height, and that the path of a ray of light through it, on entering obliquely, must be curvilinear and concave to the earth. Hence, as the mind refers the position of an object to the direction in which the ray of light enters the eye, the stars must appear to us nearer the zenith than they really are. Hence we see the stars before they have arisen and after they have set.*

§ V. AVEMPACE.

Avempace, as the West called Abou Beer Mohammed ben Ya'hya Ibn Badja, is one of the most celebrated of the Spanish Mohammedans. He flourished early in the twelfth century.

* It is eminently probable that KEPLER borrowed his optical views from AL-HAZEN. It is certain that he has no just title to originality as the discoverer, which is sometimes claimed for him.

He is the first of his compatriots in Spain who attained celebrity as a philosopher; and according to Ibn Tofail, his illustrious successor, he surpassed all contemporaries in depth of wisdom, although worldly affairs and a premature death prevented the completion of those important works which he had designed. He only published hastily written essays on Mathematics, Medicine, and Philosophy, and commentaries on Aristotle. One of his antagonists thought it a severe sarcasm to say, that he only studied mathematical science, only meditated on the heavenly bodies and on the nature of climate, 'despising the Koran, which in his arrogance he sets aside.' The same critic, with the common candour of critics, says, 'according to him it is better to do evil than good, and that beasts are better guided than men.' Munk, who gives an analysis of one of Avempace's works,* says that he impressed on Arabian Philosophy a movement directly opposed to the mystical tendencies of Algazzali, and 'qu'il proclama la science spéculative seule capable d'amener l'homme à concevoir son propre être ainsi que l'intellect actif.'

§ VI. ABUBACER.

Early in the twelfth century appeared Abou Beer Mohammed ben-'Abd-al-Malic Ibn Tofail, known in Europe as Abubacer. He was born in Andalusia; and was renowned at the court of the Almohades for his skill as a physician and poet, and for his mathematical and philosophical learning. After having filled the office of secretary to the governor of Granada, he was appointed vizir and physician to Yousouf, the second king of the Almohade dynasty, who admitted him to great intimacy. His favour at court was honourably employed in protecting other *savants*, and it was he who presented Averroes to the king; showing a sublime superiority to any of those movements of jealousy which disturb inferior minds. One day, Yousouf expressed a desire to have a clear analysis of Aristotle's doctrine. Abubacer urged the task upon Averroes, instead of undertaking it

* MUNK: *Op. cit.* pp. 389-469.

himself. One likes to hear of the success of such men, and to know that his funeral was attended in person by the King Yacoub, surnamed Al-Mansour.

Abubacer was not only grateful to his predecessor, Avempace, but generous to his successor and rival, Averroes. I should be glad to believe that he was as profound as he was liberal. The evidence, however, will not warrant the conclusions of some modern admirers. I allude particularly to the claim which has been set up for him on the ground of his having, before Copernicus, rejected the Ptolemaic hypothesis. The rejection of an established error does not always imply uncommon insight. It is often due to impatient ignorance. Every year we see men ready to prove Newton's hypothesis a mistake; and if (the supposition is not very plausible) a truer hypothesis should some day replace that of Newton, these 'undevout astronomers' will clamorously assert their claims to priority. When, therefore, we are told that Abubacer rejected the Ptolemaic hypothesis, we must ask upon what grounds he rejected it, before we credit him with a deeper insight. Averroes, in his Lesser Commentary on Aristotle's Metaphysics, speaks of Abubacer's excellent views on the subject of epicycles; and Alpetragius, in his Introduction to Astronomy, says, 'You know that the illustrious Abubacer told us that he had found out an astronomical system and the principles of celestial motions different from those put forth by Ptolemy, and which need neither eccentrics nor epicycles; and on his system he said all movements are verified and no error results. He also promised to write on this subject.' But he did not write on it; and we are left to guess at his system, through the partial glimpses given in Averroes and Alpetragius. The basis of his objection to Ptolemy's hypothesis is that it is not in harmony with the theories of motion given by Aristotle! No man of scientific culture will be curious to hear more of a system which rests on that basis, except as a matter of historical interest; and in this direction we may notice the hypothesis proposed by Alpetragius:—'All the spheres follow the movement and the

impulsion of the superior sphere which is above that of the fixed stars and is void. They have but one movement from east to west; but according as they are distant from the superior sphere, their motion is less rapid, because they receive less of its impulse. Their apparent irregularity is thus explained, without the necessity of a retrograde motion from west to east. The different spheres have their particular poles, which incline from the poles of the superior sphere. Each in following the diurnal movement of the superior moves about its own poles. These two movements result in a sort of spiral, which makes the stars incline towards the north or south. There is thus no need of eccentrics nor epicycles.'

Alpetragius avows—and the avowal is very significant—that he was not led to this hypothesis by Observation, but by a kind of divine inspiration,* which is a process of discovery much in vogue among certain classes of speculators. Nor did he ever attempt to verify his hypothesis by calculation. Calculators are seldom inspired; indeed, one may observe that the minds most given to the rejection of conclusions, which, whether true or false, have been established on laborious induction and calculation, are the minds least impressed with the necessity of any higher verification than that of their 'intuitions.' They have the most serene reliance on their own sagacity; and Alpetragius had therefore no hesitation in avowing, at the close of his treatise, that it would be impossible for him to imitate Ptolemy and enter upon all the details respecting celestial motions, for this would—occupy all his time!

Whatever may be thought of Alpetragius in our day, his hypothesis was long regarded as an immense contribution.

* 'Itaque excitavit me Deus omnipotens suo divino influxu ab alio quidem non tributo et experrectus sum à somno stupefactionis, et illuminavit oculos cordis mei ex perturbationis suis in eo quod nunquam ab aliquo cogitatum fuit, et ad id non perveni ex speculatione et discursu ingenii humani, sed ex eo quod placuit Deo ostendere sua miracula, et patefacere secretum occultum in theorica suorum orbium et notificare veritatem essentiae eorum et rectitudinem qualitatis motus.' Quoted by DELAMBRE: *Hist. Astron. au Moyen Age*.

The book was translated by Michael Scott. It was largely used by Albertus Magnus, Roger Bacon, and Vincent of Beauvais. In a treatise, written at the beginning of the fourteenth century, Isaac Israeli, a Jew of Toledo, speaks of it as the theory which agitated the whole world; although, he wisely adds, it was not worked out sufficiently to render it worthy of discussion: the system of Ptolemy could not be abandoned for an hypothesis, which was not based on exact calculations. Another Jew, Levi ben Gerson, thought it worth while to refute Alpetragius, and to prove in detail how preposterous were his notions. How far the wide dissemination of the hypothesis, and the controversy it provoked, may have prepared the way for Copernicus, is an interesting question.

To return to Abubacer. He is widely known in Europe through his philosophical romance, *Philosophus Autodidactus*, in which he endeavours to trace the development of an intelligence unbiassed by society and its traditions and prejudices. His hero, Haï, is born on a desert island situated beneath the equator. In lieu of human parents, his generation takes place through certain physical conditions; which did not appear so preposterous in the eyes of Abubacer's contemporaries and successors as in the eyes of moderns; spontaneous generation being an universally accepted hypothesis in those days. Haï had a gazelle for his wet-nurse. The different periods of his development are marked by the successive advances which he makes in the comprehension of things. From the simple knowledge of sensible things, he gradually arrives at a conception of the world and its physical laws. Later on he recognises the unity which underlies variety. Things, though multiple in their accidents, are one in essence. He thus arrives at the knowledge of Matter and Forms. The first Form is Species. All bodies are united by corporeity, i.e. the corporeal Form.

Contemplating Matter and Forms, he enters the spiritual world. It is obvious that inferior objects are produced by something. There must, therefore, be a Producer of Forms,

since whatever is produced must have a producer. Directing his attention to the heavens, Hai sees a variety of celestial bodies, which cannot be infinite. The celestial spheres are as one individual, and thus the whole universe is an entirety. Is this entirety eternal? Hai is unable to decide; but inclines to the belief that it is eternal. Be that as it may, he recognises an *agent* which perpetuates the existence of the world, and sets it in motion. This agent is neither a body nor a faculty of a body; it is the Form of the universe. All beings are the work of this Supreme Being; and our minds contemplating the beauty of the work necessarily ascend to its Creator, his goodness and perfection. All Forms are in him and issue from him; so that there is in truth no other Existence.

Hai now looks inwards. He finds that his intellect is absolutely incorporeal, since it perceives things divested of all quality—and this neither the senses nor the imagination are capable of doing. Therein lies the real essence of man, that which is neither born nor dies. The intellect is troubled by matter, and endeavours to disengage itself by giving to the body only such care as is indispensable to existence. Its beatitude and its pain are in a direct ratio to its union with God, or its distance from him. By ecstasy man unites himself with God. Then the universe appears to him only God, whose light is shed over all, but manifests itself in greater splendour in the purest beings. Multiplicity exists only for the senses. It disappears before the intellect which has disengaged itself from matter.

This romance acquired immense popularity. It has been translated into Latin, English, Dutch, and German,* and has disseminated Alexandrian and Arabian ideas in obscure quarters where otherwise they would never have penetrated.

* Pococke, in 1671, published the Arabic text with a Latin version: *Philosophus Autodidactus sive Epistola Abi Jaafar elm Tofail de Hai ebn Yokdhan*. It was reprinted in 1700. There have been three English versions, the last by OCKLEY, under this title: *The Improvement of Human Reason, exhibited in the Life of Hai Ebn Yokdhan*, 1711. A German appeared in 1726: *Der von sich selbst gelehrte Weltweise*; and another in 1783: *Der Natur-Mensch, oder Geschichte des Hai Ebn Yokdan*.

§ VII. ALGAZZĀLI.

We now turn back to the eleventh century again, to bring forward the name of an illustrious and independent thinker Algazzāli, the 'Light of Islam,' the 'Pillar of the Mosque,' who is known under the names of Gazzali, Ghazali, Algazel, and was at one time familiar to European thinkers through the attacks of his adversary Averroes.*

Algazzāli (Abou-Hamed-Mo'hammed ibn Mo'hammed Al-Ghazāli) was born in the city of Tous A.D. 1058. His father was a dealer in cotton-thread (*gazzal*), from whence he drew his name. Losing his father in early life, he was confided to the care of a Soufi. The nearest approach to what is meant by a Soufi is what we mean by Mystic. The influence of this Soufi was great. No sooner had the youth finished his studies, than he was appointed professor of theology at Bagdad, where his eloquence achieved such splendid success that all the Imans became his eager partisans. So great was the admiration he inspired, that the Mussulmans sometimes said, 'If all Islam were destroyed, it would be but a slight loss, provided Algazzāli's work on the "Revivification of the Sciences of Religion" were preserved.' This work, probably owing to its originality, was never translated into Latin during the Middle Ages, and remained a closed book to all but Arabian scholars until M. Schmölders published his version. It bears so remarkable a resemblance to the *Discours sur la Méthode* of Descartes, that had any translation of it existed in the days of Descartes, every one would have cried out against the plagiarism.

Like Descartes, he begins with describing how he had in vain interrogated every sect for an answer to the mysterious problems which 'disturbed him with a sense of things unknown;' and how he finally resolved to discard all authority,

* The most complete account of his life will be found in VON HAMMER: *O Kind! Die berühmte ethische Abhandlung Gasālī's*, Vienna, 1838. MUNK: *Mélanges*, p. 366, and SCHMÖLDERS: *Essai sur les Écoles philosophiques chez les Arabes*, Paris, 1842. From my notice of this last-named work, in the *Edinburgh Review*, April 1847, I have incorporated some passages in the ensuing pages.

and detach himself from the opinions which had been instilled into him during the unsuspecting years of childhood. 'I said to myself,' he proceeds, 'My aim is simply to know the truth of things; consequently it is indispensable for me to ascertain what is *knowledge*. Now, it was evident to me that *certain knowledge* must be that which explains the object to be known in such a manner that no doubt can remain, so that in future all error and conjecture respecting it must be impossible. Not only would the understanding then need no efforts to be convinced of certitude, but security against error is in such close connection with knowledge, that even were an apparent proof of its falsehood to be brought forward it would cause no doubt, because no suspicion of error would be possible. Thus, when I have acknowledged ten to be more than three, if any one were to say, "On the contrary, three is more than ten; and to prove the truth of my assertion, I will change this rod into a serpent;" and if he *were* to change it, my conviction of his error would remain unshaken. His manoeuvre would only produce in me admiration for his ability. I should not doubt my own knowledge.

'Then was I convinced that knowledge which I did not possess in this manner, and respecting which I had not this certainty, could inspire me with neither confidence nor assurance; and no knowledge without assurance deserves the name of knowledge.

'Having examined the state of my own knowledge, I found it divested of all that could be said to have these qualities, unless perceptions of the senses and irrefragable principles were to be considered such. I then said to myself, Now having fallen into this despair, the only hope remaining of acquiring incontestable convictions is by the perception of the senses and by necessary truths. *Their* evidence seemed to me indubitable. I began however to examine the objects of sensation and speculation, to see if they could possibly admit of doubt. Then doubts crowded upon me in such numbers that my incertitude became complete. Whence results the confidence I have in sensible things? The strongest of all

our senses is sight; and yet, looking at a shadow and perceiving it to be fixed and immovable, we judge it to be deprived of movement; nevertheless experience teaches us that, when we return to the same place an hour after, the shadow is displaced; for it does not vanish suddenly, but gradually, little by little, so as never to be at rest. If we look at the stars, they seem as small as money pieces; but mathematical proofs convince us they are larger than the earth. These and other things are judged by the senses, but rejected by reason as false. I abandoned the senses, therefore, having seen all my confidence in their truth shaken.

'Perhaps, said I, there is no assurance but in the notions of Reason: that is to say, first principles, *e.g.* ten is more than three; the same thing cannot have been created and yet have existed from all eternity; to exist and not to exist at the same time is impossible.

'Upon this the senses replied: What assurance have you that your confidence in Reason is not of the same nature as your confidence in us? When you relied on us, Reason stepped in and gave us the lie; had not Reason been there you would have continued to rely on us. Well, may there not exist some other judge superior to Reason, who, if he appeared, would refute the judgments of Reason in the same way that Reason refuted us? The non-appearance of such a judge is no proof of his non-existence.'

These sceptical arguments Algazzāli borrowed from the Grecian sceptics, and having borrowed them, he likewise borrowed from Grecian mystics, of the Alexandrian school, the means of escape from scepticism. He looked upon life as a dream.

'I strove in vain to answer the objections. And my difficulties increased when I came to reflect upon sleep. I said to myself, During sleep you give to visions a reality and consistence, and you have no suspicion of their untruth. On awakening you are made aware that they were nothing but visions. What assurance have you that all you feel and

know when awake does actually exist? It is all true as respects your condition at that moment; but it is nevertheless possible that another condition should present itself which should be to your awakened state that which your awakened state now is to your sleep; so that in respect to this higher condition your waking is but sleep.'

If such a superior condition be granted, Algazzālī asks whether we can ever attain to participation in it. He suspects that the *Ecstasy* described by the Soufis must be the very condition. But he finds himself philosophically unable to escape the consequences of scepticism: the sceptical arguments could only be refuted by demonstrations. But demonstrations themselves must be founded on first principles; if they are uncertain, no demonstration can be certain.

'I was thus forced to return to the admission of intellectual notions as the basis of all certitude. This however was not by systematic reasoning and accumulation of proofs, but by a flash of light which God sent into my soul. For whoever imagines that truth can only be rendered evident by proofs, places narrow limits to the wide compassion of the Creator.'

Thus we see Algazzālī eluding scepticism just as the Alexandrians eluded it, taking refuge in faith. He then cast his eyes on the various sects of the faithful, whom he ranged under four classes.

I. The *Dogmatists*: those who ground their doctrine wholly upon reason.

II. The *Bastīnīs*, or *Allegorists*: those who receive their doctrine from an Imam, and believe themselves sole possessors of truth.

III. The *Philosophers*: those who call themselves masters of Logic and Demonstration.

IV. The *Soufis*: those who claim an immediate intuition, by which they perceive the real manifestations of truth as ordinary men perceive material phenomena.

These schools he resolved thoroughly to question. In the writings of the Dogmatists he acknowledged that their aim was realized—but their aim was not his aim: 'Their aim,'

he says, 'is the preservation of the Faith from the alterations introduced by heretics.' But his object was philosophical, not theological; so he turned from the Dogmatists to the Philosophers, studying their works with intense ardour, convinced that he could not refute them until he had thoroughly understood them. He did refute them, entirely to his satisfaction;* and having done so, turned to the Soufis, in whose writings he found a doctrine which required the union of action with speculation, in which virtue was a guide to knowledge. The aim of the Soufis was to free the mind from earthly considerations, to purify it from all passions, to leave it only God as an object of meditation. The highest truths were not to be reached by study, but by transport—by a transformation of the soul during *ecstasy*. There is the same difference between this higher order of truth and ordinary science, as between being healthy and knowing the definition of health. To reach this state it was necessary first to purify the soul from all earthly desires, to extirpate from it all attachment to the world, and humbly direct the thoughts to our eternal home.

'Reflecting on my situation, I found myself bound to this world by a thousand ties, temptations assailing me on all sides. I then examined my actions. The best were those relating to instruction and education; and even there I saw myself given up to unimportant sciences, all useless in another world. Reflecting on the aim of my teaching, I found it was not pure in the sight of the Lord. I saw that all my efforts were directed towards the acquisition of glory to myself.'

Thus did Philosophy lead him to a speculative Asceticism, which calamity was shortly afterwards to transform into practical Asceticism. One day, as he was about to lecture to a throng of admiring auditors, his tongue refused utterance: he was dumb. This seemed to him a visitation of God, a rebuke to his vanity, which deeply afflicted him. He

* In the ninth volume of the works of AVERROES there is a treatise by ALGAZZĀLĪ, *Destructio Philosophorum*, which contains his refutation of the philosophical schools

lost his appetite; he was fast sinking; physicians declared his recovery hopeless, unless he could shake off the sadness which depressed him. He sought refuge in contemplation of the Deity.

'Having distributed my wealth, I left Bagdad and retired into Syria, where I remained two years in solitary struggle with my soul, combating my passions and exercising myself in the purification of my heart, and in preparation for the other world.'

He visited Jerusalem, and made a pilgrimage to Mecca, but at length returned to Bagdad, urged thereto by 'private affairs' and the requests of his children, as he says, but more probably urged thereto by his sense of failure, for he confesses not to have reached the *ecstatic* stage. Occasional glimpses were all he could attain, isolated moments of exaltation passing quickly away.

'Nevertheless I did not despair of finally attaining this state. Every time that any accident turned me from it, I endeavoured quickly to re-enter it. In this condition I remained ten years. In my solitude there were revelations made to me which it is impossible for me to describe, or even indicate. Enough if, for the reader's profit, I declare that the conviction was forced upon me that the Soufis indubitably walked in the true paths of salvation. Their way of life is the most beautiful, and their morals the purest that can be conceived.'

The first condition of Soufi purification is, that the novice purge his heart of all that is not God. Prayers are the means. The object is *absorption in the Deity*.

'From the very first, Soufis have such astonishing revelations that they are enabled, while waking, to see visions of angels and the souls of the prophets; they hear their voices, and receive their favours. Afterwards a transport exalts them beyond the mere perception of forms, to a degree which exceeds all expression, and concerning which we cannot speak without employing language that would sound blasphemous. In fact, some have gone so far as to imagine

themselves to be *amalgamated with God*, others *identified with him*, and others to be *associated with him*. All these are sinful.'

Algazzālī refuses to enter more minutely into this subject; he contents himself with the assertion that whoso knows not Ecstasy knows prophetism only by name. And what is *Prophetism*? The fourth stage in intellectual development. The first, or infantile stage, is that of pure Sensation; the second, which begins at the age of seven, is that of Understanding; the third is Reason, by means of which the intellect perceives the necessary, the possible, the absolute, and all those higher objects which transcend the understanding.* After this comes the fourth stage, when another eye is opened by which man perceives things hidden from others—perceives all that will be—perceives things that escape the perceptions of Reason, as the objects of Reason escape the Understanding, and as the objects of Understanding escape the sensitive faculty. This is Prophetism. Algazzālī undertakes to prove the existence of this faculty:

'Doubts respecting Prophetism must refer either to its possibility or its reality. To prove its possibility it is only necessary to prove that it belongs to the category of objects which cannot be regarded as the products of intelligence: such, for example, as Astronomy or Medicine. For whoso studies these sciences is aware that they cannot be comprehended except by Divine inspiration, with the assistance of God, and not by experience. Since there are astronomical indications which appear only once in a thousand years, how could they be known by experience?† From this argument it is evident that it is very possible to perceive things which the intellect cannot conceive. And this is precisely one of the properties of Prophetism which has a myriad other properties; but these are only perceptible during Ecstasy by those who had the life of the Soufis.'

Algazzālī wrote a special treatise against the philosophers

* KANT's three psychological elements, *Sinnlichkeit, Verstand, Vernunft*.

† O sancta simplicitas!

in which he arraigns them under twenty heads, the most interesting to us being that of causality. 'En somme,' says M. Munk, 'tout le raisonnement d'Al-Gazâli peut se ramener à ces deux propositions: 1°. Lorsque deux circonstances existent toujours simultanément, rien ne prouve que l'une soit la cause de l'autre; ainsi par exemple, un aveugle-né à qui on aurait donné la vue pendant le jour et qui n'aurait jamais entendu parler du jour ni de la nuit, s'imaginerait qu'il voit par l'action des couleurs qui se présentent à lui, et ne tiendrait pas compte de la lumière du soleil par laquelle les couleurs font impression sur ses yeux. 2°. Quand même on admettrait l'action de certaines causes par une loi de la nature, il ne s'ensuit nullement que l'effet, même dans les circonstances analogues et sur des objets analogues, soit toujours le même; ainsi le coton peut, sans cesser d'être le coton, prendre (par la volonté de Dieu) quelque qualité qui empêche l'action du feu, comme on voit des hommes, au moyen d'emplâtres faits avec une certaine herbe, se rendre incombustibles. En un mot, ce que les philosophes appellent la loi de la nature, ou le principe de causalité, est une chose qui arrive *habituellement*, parceque Dieu le veut, et nous l'admettons comme certain parceque Dieu, sachant dans sa prescience que les choses seront presque toujours ainsi, nous en a donné la conscience. Mais il n'y a pas de loi immuable de la nature qui enchaîne la volonté du Créateur.'

I have given these arguments against causality partly to exhibit the style of thought which was considered powerful in those days, and partly to add one more to the many illustrations of historical misapprehension which the carelessness of writers propagates. Having read what Algazzâli taught, the reader will be somewhat amazed to find M. Renan saying of it: 'Hume n'a rien dit de plus.'†

The influence of Algazzâli on Europe was null, but on the East it was immense; as M. Munk says, it struck a blow at philosophy 'dont elle ne pût plus se relever, et ce fut en

* MUNK: *Mélange*, p. 379.

† RENAN: *Averroes*, p. 74.

Espagne qu'elle traversa encore un siècle de gloire et trouva un ardent défenseur dans le célèbre Ibn-Roschd.' To him we now pass.

§ VIII. AVERROES.

Averroes (Aboulwalid Mo'hammed ibn Ahmed ibn Mo'hammed ibn-Roschd) was born at Cordova about 1120.

His family belonged to the most considerable in Andalusia, high in office, high in esteem. He was greatly befriended by Abubacer, and was intimate with the family of Avenzoar, his colleague at the court of Yousouf, during whose reign he continued in high favor and was employed in various important offices, so that his works were written amid continual interruptions. This favor seems to have been increased under Yousouf's successor, Yacoub Almansour, who was fond of discussing scientific and philosophic questions with him. Indeed Averroes occasionally so far forgot etiquette as to address his sovereign thus: 'Listen, O my brother!' Such intimacy naturally excited the jealousy of those less favored, and perhaps by their machinations, or perhaps from some imprudence on his part, he suddenly fell into disgrace. The pretext was his heterodoxy. He was banished from Cordova, and his works were condemned to the flames—an exception being made in favor of the works on medicine, arithmetic, and elementary astronomy.

Almansour issued an edict declaring that God had ordained hell fire for those who impiously asserted truth to be given by Reason alone. From such a sovereign such a declaration must be attributed to the kind of coercion exercised by priests over all but the most self-willed rulers. At any rate, the disgrace of Averroes was only temporary. The edict was rescinded, and Averroes recalled. But the end was near. He died at Morocco in 1198.

His disgrace and the accusations of heterodoxy greatly occupied the attention of contemporaries. Arabian Philosophy, introduced under Hakem in the tenth century, and cultivated with so much zeal, now began to struggle for existence against the religious fanaticism which was finally to suppress

it. The eternal contest between Reason and Faith, between free thought and despotic ignorance, had been growing fiercer every year; even Algazzāli had thrown himself by a flank movement against philosophy. The priestly party became strong enough to enforce its views even on sceptical Emirs, especially in times of political trouble, when the support of the ignorant multitude became of consequence. In Spain, as elsewhere, the mass of men cherish an instinctive dislike to philosophers, partly because early taught to dread Inquiry as inimical to Religion, and partly because the implied equality which exists between members of a church, where all alike share the blessings and the glory of illumination, is, in the presence of philosophers, rudely set aside, and replaced by an irresistible sense of inequality. The creed of the Bishop is the creed of the grocer. But the philosophy of that grocer is in no sense the philosophy of a Professor. Therefore it is that the Bishop will be revered where the Professor will be stoned. Intellect is that which man claims as specially his own; it is the one limiting distinction; and thus the multitude, so tolerant of the claims of an aristocracy of birth or of wealth, is uneasy under the claims of an aristocracy of intelligence.

The term philosophy is used by Mohammedans of our day as synonymous with infidelity, impiety, immorality. Nay, one finds this interpretation not altogether unknown in Europe, and that, too, in circles claiming a high degree of culture. In Spain, during the twelfth century, this interpretation became general. 'A theological reaction,' says M. Renan, 'analogous to that which in the Latin Church followed the Council of Trent, undertook to recover its ground by violence. Islamism, like all religions, has gone on strengthening itself and obtaining a more absolute faith from its adepts. The greater part of Mahomet's companions hardly believed in his supernatural mission; incredulity was rife during the first six centuries; but since then there has not been a doubt, not a protest. That has come to pass in Islamism and in Catholicism in Spain which would have

come to pass all over Europe if the religious movement at the close of the sixteenth and beginning of the seventeenth centuries had succeeded in arresting rational development.'

Aristotle became infamous in Islam; all the philosophers were proscribed, and their works destroyed. Hence it was that Averroes, who during four centuries was venerated by Jews, and highly esteemed by Christians, has left scarcely any trace on the minds of Arabs. Hence also the great rarity of his works in the original; while Hebrew and Latin versions abound in all great collections of manuscripts. The published Latin versions are very numerous. From 1480 to 1580, Renan tells us, scarcely a year elapsed without some new edition appearing. In Venice alone more than fifty editions were published, of which fourteen or fifteen are more or less complete.*

The claims of Averroes to European admiration were as a physician and a commentator on Aristotle. In the former character he was surpassed by Avicenna. Indeed we have only to learn that he followed Aristotle's teaching in preference to that of Galen, whenever the two were at variance, to indicate the slight reliance which can be placed on his medical knowledge. As a commentator he was unrivalled; and for a considerable period Philosophy in Spain and among the schoolmen may be defined thus: 'Nature interpreted by Aristotle, Aristotle interpreted by Averroes.'

The superstitious servility with which he accepted the dicta of the Stagyrice is indicated in the declaration that 'Aristotle initiated and perfected all the sciences, no writer before him being worthy of mention, no writer after him having, in the course of fifteen centuries, added anything of importance or detected any serious error.' Yet it is unanimously affirmed by modern scholars that Averroes, and the Arabian commentators generally, are far from faithful interpreters of Aristotle. They attach themselves in preference

* The editio princeps appeared at Padua in 1472. Towards the close of the 16th century the reprints became rarer; only a few of the medical works appeared. In the 17th century the dust began to settle on those once famous folios, from which it is never likely to be shaken.

to certain ideas obscurely indicated by the Stagyrice, and give these an undue prominence.

In three different works Averroes presented his master. 1. The *Great Commentary*, which gives each paragraph of the text, and interprets it sentence by sentence, introducing theoretical discussions as digressions. This form of commentary is peculiar to Avicenna, who borrowed it from that adopted in regard to the Koran. 2. The *Middle Commentary*, which merely cites the first words of the original paragraphs, and then weaves together text and interpretation after the manner of Avicenna—a form subsequently adopted by Albertus Magnus. 3. The *Third Commentary* is simply one of paraphrase and analysis, in which Averroes expounds the opinions of Aristotle as delivered in various treatises.

Error is long-lived. Averroes having once been named as the first who translated Aristotle from the Greek into Arabic, the statement has become stereotyped;* but there are three reasons against it. 1. Neither Averroes, nor any other Mohammedan in Spain, could read Greek.† 2. Arabic translations of Aristotle existed three centuries before the time of Averroes. 3. The Arabic versions of Greek writers were never made direct from the Greek, but from Syriac versions.

The barbarous jargon which the European schools had to master, when they opened the Latin versions of Averroes, may be imagined when it is known that these were Latin translations from a Hebrew version of an Arabic commentary on an Arabic translation of a Syriac version of a Greek text.

Averroes, like all the schoolmen and Arabians, exerted his ingenuity in discussing Matter and Form, substance and accident, virtual and actual, intellect and agent, but he added nothing to what was known in his day, although as the last

* MUNK and RENAN name some of the unsuspecting repeaters of this tradition: NIPHUS, PATRIZIO, MARC ODDO, BRUYERIN, SIGONIO, TOMASINI, GASSENDI, LONGUERUE, MORERI, D'HERBELLOT, CASIRI, BÜHLE, HARLES, ROSSI, MIDDELDORFF, TENNEMANN, DEGÉRANDO, JOURDAIN, and the *Conversations Lexicon*.

† The ignorance of Averroes is pointedly shown by LUDOVICUS VIVES: *Opera* I. 141. Bâle, 1555.

of the Arabs he had the reputation which often falls upon those who inherit what others invent. He exercised an important influence on the mind of Europe—especially on the development of that spirit of inquiry which Algazzâli had endeavoured successfully to discredit in the East, and which the Church was crushing in the West. The instinct of Theology early detected whither he tended; and Averroism became, as in later years Spinozism became, a synonym of infidelity. There are indeed several passages in which Averroes is explicit. I quote one given by Munk from the Hebrew version of the Commentary—a passage suppressed in the Latin version. 'The religion peculiar to philosophers is the study of that which is; for no sublimer worship can be given to God than the knowledge of his works, which leads to the knowledge of him in his reality. That is the noblest action in his eyes; the vilest is taxing as error and vain presumption the effort of those who practise this worship, and who in this religion have the purest of religions.' No wonder such a passage was suppressed! Here is another, which was not suppressed: 'Among dangerous fictions we must count those which tend to regard virtue only as a means of arriving at happiness. This nullifies virtue; since the abstaining from vice is in the hope of being repaid with usury. The brave man will only seek death in order to escape a greater evil. The just man will respect the property of another only to acquire more.' And alluding to the myths respecting a future world, he says: 'These fables only serve to falsify the minds of the people, especially of children, without producing any real amelioration. I know men perfectly moral who reject all such fictions, and who are quite as virtuous as those who accept them.'

§ IX. AVICEBRON.

One of the writers who exercised most influence over the Christian thinkers of the thirteenth century was the author of the *Fons Vitæ*, known by the name of Avicebron, and

believed to be one of the Arabian philosophers, but now, thanks to the researches of M. Munk, proved to have been the renowned Jew, Ibn-Gebirol. He was contemporary with Avicenna, but his philosophical work seems to have been entirely neglected both by Arabs and Jews, and to have found its public among the Christians, who studied it so eagerly that the learned Jourdain declares a true knowledge of that period to be impossible to those unacquainted with the *Fons Vitæ*.* The translation and analysis of this work given by M. Munk render it accessible to all.

The part played by the Jews as physicians,† merchants, bankers, has often been appreciated. The part played by them as thinkers is less frequently mentioned. Yet it has been considerable. Not to name their great monotheistic contribution, let us only pause for a moment on the three great names of Philo, Ibn-Gebirol, and Spinoza, all three departing from the doctrines taught in the Synagogue, all three teaching a doctrine profoundly opposed to Christianity, yet all three promulgating ideas that had an irresistible fascination overpowering even the repulsion their heterodoxy excited. Confining ourselves to the more special topic now before us—the Jews must be regarded as the chief instruments whereby the Arabian philosophy was made effective on European culture. Even in Spain the Jews were the chief students of this philosophy. ‘Dans le monde musulman comme dans le monde chrétien,’ says M. Munk, ‘les juifs, exclus de la vie publique, voués à la haine et au mépris par la religion dominante, toujours en présence des dangers dont les menaçait le fanatisme de la foule, ne trouvaient la tranquillité et le bonheur que dans un isolement complet. Ignorés de la société, les savants juifs vouaient aux sciences un culte désintéressé.’

And as translators and transmitters of the Arabian culture they had varied opportunities. Hated and persecuted though they were, the ability and perseverance of the Jews made

* JOURDAIN: *Recherches sur les traductions latines d'Aristote*, p. 197.

† Consult CARMOLY: *Hist. des Médecins Juifs anciens et modernes*, Bruxelles, 1844.

them everywhere necessary to princes and nobles. The common people, feeling no need of culture, and having no chance of borrowing money, indulged in unrestrained religious hatred; but the great pledged their estates to Hebrew money-lenders, and submitted their bodies to Hebrew physicians, while the learned, unsuspectingly, submitted their minds to Hebrew thinkers and translators. The facility with which the Jews mastered languages made them ready interpreters between Mussulman and Christian. It was through their translations, and through their original thinkers, such as Avicenna (Ibn-Gebirol) and Moses Maimonides, that the West became leavened with Greek and Oriental thought.*

The student who is tempted to open the *Fons Vitæ*, or to read M. Munk's analysis of it, will be struck with the ‘familiar faces’ of speculations which he has attributed to modern Germans, together with speculations of the Platonic and Peripatetic schools. I cannot afford the space necessary to any exposition of them.

In reviewing the labours of the Arabians we are struck with the facts that they were all men of high family, holding important positions; they were all surprisingly voluminous; they were all Aristotelians; they were all given more or less to science, especially to Medicine. Nevertheless, in spite of their advantage of position, in spite of their ardour, they left Science very much as they found it, and cannot be said to have advanced Philosophy. No germinal discoveries in Science are due to them. They improved

* M. MUNK is guilty of a strange oversight in saying that the scholastic dispute of Nominalism and Realism sprang from Arabian Aristotelianism (*Mélanges*, p. 335), for although it is perfectly true that ALBERTUS MAGNUS and THOMAS AQUINAS studied Aristotle in Latin versions made from Hebrew versions, it is no less true—as we have seen—that the scholastic quarrel began long before Arabian commentators were heard of. M. JOURDAIN (*Recherches*, p. 210), and M. RENAN (*Averroès*, p. 175) assure us that there is no citation of any Arabian writer by the scholastics before the beginning of the 13th century. It is true that towards the middle of the 12th century GONDIALVI and others had translated certain writings, but they attracted no attention from nominalists or realists. In the 11th century the dispute had already developed all its leading characters.

instruments; they collected facts; they kept alive the sacred fire. But their labours were frustrated by their Method; and the only advantage the world received from them, was the preservation of what the illustrious Greeks had done; and the scepticism which they impressed on European thought.

All the patronage of Emirs and Caliphs, all the efforts of philosophers, passed away without founding any large basis on which succeeding generations could build. In astronomy, in chemistry, in medicine, the Arabs made some subordinate improvements, largely enriching the store of observed facts, but they discovered no laws, they originated none of the germinal conceptions which act as impulses and regulators to research. The successors of the great Hipparchus had fatally neglected Observation; and the science he created languished in consequence. The Arabs, according to Delambre,* devoted their attention chiefly to Observation; and their failure is one among the many notable examples of the impotence of Observation, when undirected by a true Method, which should teach *what* is to be observed, and *how* to observe it. They had adopted the Mathematics of the Alexandrians; but unhappily they had also adopted the Metaphysics of the Alexandrians and the Astrology of the Chaldeans. Hence it was to such problems as the influences of the stars on the destinies of men, that they applied the glorious instrument of Trigonometry which had rendered Astronomy possible as a science. Moreover their superstitious reverence for Greek theories made progress impossible.

This did not thwart their influence on Europe. There are writers who question that influence, and who affirm that the Revival of Learning would have brought the Greek thinkers into the course of European evolution disengaged from the Arabian misapprehensions. But it seems to me that the intellectual condition of Europe at the close of the

* DELAMBRE: *Astronomie du moyen âge*, xxxix. 'Ils étaient devenus possesseurs de tous les écrits des Grecs, il était assez naturel qu'ils voulussent reconnaître par eux-mêmes l'exactitude de ces tables qui devaient servir à tous leurs calculs astronomiques et astrologiques.'

twelfth century was fast relapsing under a despotism which would have prevented the influence of Greek thought from taking effect, unless some other concurrent causes had been at work. It is quite true that the authority of Aristotle was never wholly lost, even during the darkest of the dark ages. It is true that a tradition of ancient glory survived, though the light itself was nearly extinct. But we must guard against exaggeration on this subject. It is misleading to assert, without qualification, that culture was never entirely lost, because a few monasteries preserved a few works of Greek and Latin writers which no one read. M. Jourdain says that throughout the Middle Ages Seneca's *Natural Questions*, Lucretius,* the philosophic works of Cicero, Apuleius, Cassiodorus, and Boethius were read. What then? Do these represent ancient culture? and were even these works appreciated?† The slight tincture of ancient learning which was preserved, had no chance against the massive ignorance of the clergy.

With respect to Aristotle, the discussions as to whether his writings were, or were not, made known to Europe through the Arabs may be considered finally settled by M. Jourdain. As a logician he was known; but not until the beginning of the thirteenth century, when his metaphysical and scientific works had been introduced by the Arabs, did he become *princeps philosophorum*, and estimated more than as a logician.

Besides the introduction of Aristotle, there was an agitating scepticism stimulated by the works of the Arabs, indirectly through their instigations to positive research, directly through the suggestion that all religions have a similar basis: so far from one alone possessing a divine origin, every other being

* I question whether LUCRETIVUS was much read before the Renaissance; his opinions must have been too offensive. I cannot find any evidence of his having been read. In ALCUIN's poem (quoted by HEEREN, *Gesch. d. class. Litt.* i. 132-3), where the authors then noted are named, Lucretius does not appear. In the Bobbio Catalogue his name occurs among the classic writers; but this is the only trace I have been able to find.

† Compare EICHORN: *Allgemeine Geschichte der Cultur*, II. 54, 58. *Histoire littéraire de la France*, VI. 6. WHARTON: *Hist. of English Poetry*, I. Diss. 2. RÉMUSAT: *St. Anselme de Cantorbéry*, p. 90.

the product of error and imposture, all are but the efforts of the human mind to solve the great mystery; and if one solution be more acceptable than another, it must reconcile its pretensions with human Reason. This idea, hazily present to the minds of several thinkers in earlier days, has of late years been rapidly growing into clearness and the authority of clearness. It could not have emerged unless there had been intimate or protracted communion between Christians, Jews, and Mohammedans. So long as nations were kept apart they naturally regarded each other's religion as a mass of absurd superstitions; no sooner was there an intellectual fusion than the agreement in ideas and sentiments, and the similarity in pretensions, became obvious to many sagacious intellects. It was in vain that orthodox Christians undertook to refute Judaism and Islamism: their very refutations were promulgations of the ideas attacked; they displaced the vague notions which had been held in horror or contempt, by definite notions which were not always seen to be so erroneous as the refuter affirmed. This indeed is the strategical mistake of all polemical Theology. Silence is the strongest fortress. When Theology attempts an answer, it appeals to Reason, and that appeal is often fatal to Faith. Theology is not founded upon Reason, and should seek no support in demonstration.

There had been scepticism before the thirteenth century, but no real incredulity; this doctrine, and that doctrine, had been disputed, rejected; but the foundation of Christian doctrine had never been touched. It was the foundation which was reached when the idea was reached that all religions have a common ground. This was in the thirteenth century, and may be traced to Arabian influence. The conception of Mahomet as a prophet and founder of a monotheistic creed, led to the conclusion that there were three religions founded on analogous principles, and all three mingled with fables. It was this which originated the myth of the work *De tribus Impostoribus*.*

* RENAN: *Averroës*, p. 224. 'C'est ici l'idée incrédule par excellence; comme toutes les idées nouvelles, elle correspondit à un agrandissement de la connais-

The introduction of Arabian writings divides the history of the Middle Ages into two markedly distinct epochs. In the first epoch Philosophy was not only servile to the Church, it was without materials, and without a Method. It lived upon the scanty remains of ancient learning, such as were contained in the compilations of Martianus Capella, Bede, and Isidore of Seville. In the second epoch a vast accession of material, in the works of Aristotle and the Alexandrians commented by the Arabians, prepared the way for the positive Method.

Before glancing at this second epoch, it will be well if we open Isidore of Seville's *Encyclopædia*, the *Etymologiarum libri XX.*, as an index of the culture of ages when abridgments replaced research, and when the explanation of terms was held to be knowledge. For several centuries this was the text book; and the reader, on learning the nature of its contents, will doubtless share my surprise when I first became acquainted with it, in my eagerness to gain some definite idea of the culture of those times.

The first book is on Grammar. In thirty-nine chapters he skims over this great topic, which in those days had supreme importance, and not a single observation of the slightest value escapes him. He is content to give a verbal explanation of grammatical terms without one philosophical rule. Four chapters on Fable and History succeed. As samples of his treatment of these subjects I quote two of these chapters below.* No amount of description will convey a better idea of the work.

sance de l'univers. . . . Quel ébranlement pour les consciences, le jour où l'on s'aperçoit qu'en dehors de la religion que l'on professe, il en est d'autres qui ne sont pas entièrement dénuées de raison!' Among literary curiosities this (imaginary) work *De tribus Impostoribus* is certainly one of the most instructive. Its authorship has been confidently assigned to various writers, including the sceptical emperor Frederick II. Its abominable doctrines have elicited eloquent refutations and indignant protests. And now the proof is overwhelming that there never was such a work at all.

* CAP. xli. *De Historia*. Historia est narratio rei gestæ, per quam ea, quæ in præterito facta sunt, dignoscuntur. Dicta autem græce historia ἀπὸ τοῦ ἱστορεῖν, id est a *videre* vel *cognoscere*. Apud veteres enim nemo conscribat historiam, nisi is qui interfuisse, et ea, quæ conscribenda essent, vidisset. Melius enim oculis quæ sunt deprehendimus quam quæ auditiæ collegimus. Quæ enim videntur

The second book, consisting of thirty-one brief chapters, treats of Rhetoric and Dialectics in the same meagre style. The third book, of seventy-one chapters, expounds the four mathematical sciences then studied, Arithmetic, Geometry, Music, and Astronomy. They will be attacked with some eagerness by the student anxious to learn what was known and thought on these subjects; but a few pages will allay that eagerness. True to the principle of giving verbal explanations of the various terms current in these sciences, the worthy Bishop never deviates into philosophy, except in such passages as that on the power of music,* or the brief yet interesting remarks on Astrology as superstitious.† How completely the magnificent labours of Hipparchus and Ptolemy had vanished from the scene, how utterly their results and methods had passed away, may be estimated on finding Isidore, in his chapter on the size of the sun and the moon, unable to give more precise information than that the sun is larger than the earth, and the moon less than the sun.

The fourth book is on Medicine, and consists of thirteen chapters of etymology. The fifth book, strangely enough, combines Legislation and Chronology! The sixth treats of Scripture canons, of Libraries, of Books, Bookbinding,

sine mendacio proferuntur. Hæc disciplina ad grammaticam pertinet: quia quidquid dignum memoria est, literis mandatur. Historiæ autem ideo *monumenta* dicuntur, quod memoriam tribuunt rerum gestarum. *Series* autem dicta per translationem a sertis florum, invicem comprehensorum.

CAP. xliii. *De utilitate Historiæ.* Historiæ gentium non impediunt legentes in iis, quæ utilia dixerunt. Multi enim sapientes præterita hominum gesta ad institutionem præsentium historiis indiderunt. Siquidem et per historiam summa retro temporum annorumque supputatio comprehenditur: et ea per consulum regumque successum multa necessaria perscrutantur.—*Opera*, ed. AREVALI, Rome, 1795, 7 vols. 4to., iii. 73.

* *Op. cit.* p. 133.

† CAP. xxvii. *De differentia Astronomiæ et Astrologiæ.* Inter astronomiam autem et astrologiam aliquid differt. Nam *astronomia* conversionem cæli, ortus, abitus, motusque siderum continet, vel qua ex causa ita vocentur. *Astrologia* vero partim naturalis partim superstitiosa est. *Naturalis*, dum exequitur solis et lunæ cursus, vel stellarum certasque temporum stationis. *Superstitiosa* vero est illa quam mathematici sequuntur qui in stellis augurantur, quique etiam duodecim signa per singula animæ vel corporis membra disponunt, siderumque cursu nativitatibus hominum et mores prædicere conantur.—P. 144.

Writing materials, and the determination of Easter. The seventh of God, Angels, Prophets, and Monks. The eighth of the Jews and their sects—among which there is a piquant mention of the heretics named *Hemerobaptistæ*, who carried the notion of cleanliness being akin to godliness to the absurd length of washing their clothes and bodies daily!* The list of Christian heretics, which succeeds, is interesting from the minuteness of the enumeration, though nothing can be more meagre than the indication of their opinions.

The ninth book treats of Languages, the Names of nations, and of Civil and Military Titles. The tenth is an alphabetical array of etymologies, absurd enough. The eleventh treats of Man and Portents in four brief chapters, wherein we are told that *Homo* is the name given to man 'quia ex humo factus est;' and his body is called corpus 'quod corruptum perit.' Then follows an explanation of anatomical terms. The twelfth book is on Animals, without one ray of light. The thirteenth and fourteenth treat of Geography and Meteorology; the fifteenth of the origin of Kingdoms, of Public Edifices, and of Roads; the sixteenth of Mineralogy, Weights and Measures; the seventeenth of Agriculture; the eighteenth of War and Sports; the nineteenth of Ships, Architecture, and Clothes; and the final book of Food, Domestic Utensils, Carriages, and Agricultural Implements.

Anyone even superficially acquainted with the Philosophy of these days, has only to combine with it such Science as this encyclopædia furnishes, to form a conception of the culture which the Arabian influence came to vivify.

* 'Hemerobaptistæ, eo quod quotidie vestimenta sua et corpora lavant,' *op. cit.* p. 351.

CHAPTER III.

THE RISE OF POSITIVE SCIENCE.

§ 1. THE THIRTEENTH CENTURY.

THE thirteenth century opens a new era; there, and not in the sixteenth, we must recognise the origin, as far as any origin can be definitely assigned, of the modern era. Scholasticism was far from dead; indeed the most illustrious scholastics, Albertus Magnus, Aquinas, Duns Scotus, and Occam, have still to be summoned before us; but Scholasticism had propounded all its problems, all its methods, and all its solutions. The renowned doctors who succeeded could only manipulate the old forms. Meanwhile the most redoubtable enemy of Scholasticism, which was finally to drive it into utter and helpless rout, had appeared on the field.

Two social influences of incalculable importance now first appear: these are what Auguste Comte calls the Industrial and the Scientific elements. Society, on the Feudal system, was governed by two great powers, the military or temporal, and the clerical or spiritual. By the sixteenth century each had apparently established itself for perpetual dominion; yet a retrospective glance detects even there the seeds of inevitable dissolution; those seeds are the industrial and scientific tendencies. Society advanced, the military function gradually declined in importance; and the industrial function, as gradually, increased. The importance of the clerical function also declined as the widening thoughts of men slowly changed the general conception of the world, and as the incompetence of theological notions became

daily more conspicuously contrasted with the certainties of Science. Society ceased to be based mainly on war. Peace permitted industrial development, and industry urgently demanded peace. The army then became the servant of society, and even as a servant its importance has slowly, but inevitably, declined. In like manner the Church, which formerly represented the spiritual power, which had regulated the beliefs, and with beliefs the actions of society, lost its supremacy and gradually lost its hold on the convictions, as one by one the various domains of thought were invaded by positive knowledge. Its position has now dwindled down to that of a friendly monitor, and even as such is only maintained by a constant struggle. Its very adherents only look to it for a solemn sanction, never for scientific guidance. It once claimed to decide all questions; none are put to it now, except such as have reference to another world. The affairs of this world have long passed out of its jurisdiction.

Such has been the result of six centuries of evolution, an evolution unsuspected in the thirteenth century, nor yet generally appreciated in our own. It has moved through fierce struggles. Both the military and clerical powers have as indubitably declined as the industrial and scientific powers have advanced. The separation of the temporal and spiritual is not yet completed, but the management of temporal affairs has passed from the hands of Force into the hands of Law; and the management of spiritual affairs has passed from the dominion of Faith to the dominion of Reason. A radical change has been effected in our general conception of the world; the belief in supernatural agencies has given place to an ever-widening belief in natural agencies. In other words, the theological point of view has been discarded in all questions not immediately affecting Religion. Instead of conceiving the world under the dominion of Volitions, in their very essence *variable*, we have learned to conceive it as under the dominion of Laws, in their nature *invariable*, and

invariable because they are the modes of action of immanent powers, the relations of natural properties of things. This mighty change was slowly effected. Centuries of observation and meditation were necessary before the various and seemingly variable phenomena of the external order were suspected to arise from simple and invariable agencies; powers of the world and *in* it, not powers existing apart from the world in alienated majesty and sublime independence.

Such a change is indeed radical. It is opposed to all primitive conceptions, and is still resisted by the imperfectly cultivated mind. It is the conquest of scientific research, which first disturbed the primitive conception by proving that this Earth was very far from being the greatest object in the universe, to which all other objects were subordinate. Astronomy, with its rigorous methods, assigned the Earth its place among celestial bodies.* Afterwards Biology gave what may be regarded as the complementary demonstration by proving that Man was not the lord of creation, but simply the apex of the animal series. Instead of the universe being subordinated to him, it was proved to be a vast system of magnificent Life, of which he only formed a modest item. These ideas having taken possession of men's minds, prepared the way for the conception of Society itself being not less rigorously determined in its evolution by laws; so that just as in the life of an individual there are the successive Ages, in the life of Humanity there are successive Epochs, each age and each epoch being the product of that which went before it.

The results of this change in our conception of the world, by which the whole compass of phenomena, from the transit of a star to the creed of a nation, from the evolution

* The admission of the fact that the Earth was small in comparison with other celestial bodies irresistibly suggested the idea of those bodies being also inhabited. Men struggled against this inference, and they struggle against it still. AQUINAS asserted that there could only be one inhabited world; and his grounds were these: if a second were admitted there would be no reason for denying a third, and so on to infinity, 'which would be contrary to truth and revelation.'

of an organic cell to the evolution of Science, are all brought under Law—may be summed up under two heads, theoretical and practical. The theoretical result is the limitation of our speculative activity to the problems that are verifiable—a limitation which is an intensification of power by its economy of effort and definiteness of aim. The practical result is that we, having once detected the modes of action of the immanent powers, can often foresee what will occur under given conditions, and thus either we can modify them so as to adapt them to our needs, or we can resign ourselves to them where they are seen to be inevitable.

It was in the thirteenth century that the great social and intellectual influences began the work of dissolution and reconstruction. I cannot pause here to enumerate the varied claims of this epoch, the importance of its political, religious, and social struggles, the splendour of its Architecture, the rapid development of its Commerce; my business is with its Philosophy, and especially with the new directions impressed upon the movement of Philosophy by the introduction of Greek and Arabian science. At the close of the twelfth century Scholasticism had passed into Mysticism; urged by a weary sense of its impotence, Reason was in danger of once more becoming the obedient servant of Faith. We have now to see the twofold demand for Authority and Liberty, responded to by the installation of Aristotle, and the widening reach of physical research. These may be best considered in two eminent types, Albertus Magnus and Roger Bacon: the former is the most conspicuous figure of the century, and may be regarded as the incarnation of the principle of Authority; the latter is so distinguishably the prophet of modern Inquiry, that only in modern times has his true position been understood.

§ II. ALBERTUS MAGNUS.

The 'ape of Aristotle,' as he was not unreasonably named, endeavoured to consolidate the theological conception of the

world, by bringing all classes of phenomena within an encyclopædic system in harmony with that conception. I have only a second-hand acquaintance with his works. More than once, indeed, I have opened the ponderous folios with the determination to master at least some portion of their contents; but I shut them again with an alacrity of impatience which will be best comprehended by anyone who makes a similar attempt. In the analyses given by Jourdain, Hauréau, and Rousselot* may be read as much as most students will desire.

Albert, count of Bollstadt, was born at Lavingen, in Swabia, in the year 1193. After studying dialectics at Paris, mathematics and medicine at Padua, and metaphysics in many places, he joined the Dominicans, and became renowned as preacher and teacher. This indeed was his true vocation; and after tasting many and high honours, he resigned his bishopric and returned to his professorial chair at Cologne, and died there, aged eighty-seven, leaving behind him an immense reputation, and works which in Jammy's edition amount to twenty-one thick folios. Legend has hovered round his name. Vincent de Beauvais called him a magician, and the people believed in his magic, in quite another sense. Alchemy was his favourite study; and although all scientific inquiry had a suspicious relationship with the darker powers, alchemy was supposed to be, *par excellence*, the instrument of magic.

Albertus Magnus added nothing of his own as a contribution to Philosophy, but he powerfully affected the thought of his day by the encyclopædic character of his labours. He reproduced every one of Aristotle's treatises with commentary, and with such additions as the writings of the Arabs supplied. That he frequently misunderstood Aristotle may have been due as much to the corrupt Arabian sources on which he relied,† as to the theological bias with

* The work of M. POUCHET, *Histoire des Sciences Naturelles au Moyen Age; ou Albert le Grand et son Époque*, Paris, 1853, is a poor compilation from second-hand sources.

† See this circumstantially established by JOURDAIN: *Recherches sur les traductions latines d'Aristote*.

which he necessarily studied them. It is certain that both by nature and education he was indisposed to innovate, especially in questions which had a theological bearing. 'Whenever divine things are touched on,' he says, 'faith must predominate over reason, authority over argument;' and accordingly the decisions of Aristotle, authoritative as they are in matters of Philosophy, have nevertheless to give way to the decisions of the Church, whenever there seems to be a discrepancy: as to either of them giving way to the truth of things, the alternative is never thought of.

Nevertheless, in spite of his reverence for Authority, the fact that he was the first doctor in the Middle Ages who publicly commented on the various treatises of Aristotle sufficiently accounts for the eminence of his reputation. By spreading the knowledge of what Aristotle and the Arabians taught he enlarged the horizon of Philosophy, and stimulated men's minds to research in other directions than those in which Scholasticism hitherto had confined them. Physics, Alchemy, Natural History, Ethics, were indeed but imperfectly treated: it was a great thing for these subjects to be treated at all. Moreover Scepticism was aided in another way, unconsciously indeed, yet all the more effectively:—I allude to the plan Albertus uniformly pursues, and which was followed by all his successors, of stating the objections which can be raised against every thesis, and answering them serially. It is true that his mode of answering them is very little more than an interrogation of the authorities; but the mere habit of debate was certain to develop Scepticism.

The full development of his efforts is seen in Aquinas, the greatest of the scholastics. But I cannot pause here to sketch the portrait of the Angelic Doctor (born 1227, died 1274). Referring the student to the special historians of this epoch,* I must hasten on to the thinker who represents the critical and insurgent movement.

* An interesting discussion of the question whether Aquinas did or did not hold the doctrine of 'sensible species' or 'ideas' as something intermediate between

§ III. ROGER BACON.

There is no writer during the whole of the Middle Ages so interesting, to those who are tracing the evolution of thought, as Roger Bacon; but my present limits do not permit of an exhaustive treatment of his labours, and as I propose to devote a special chapter to him in a future History of Science, I must be content here with a very rapid indication of the part he played, and refer the reader to the excellent sources named below.*

Roger Bacon is an energetic representative of the insurgent minds of the thirteenth century, and he had in common with the insurgent minds of most ages a noble vision of a coming future, and an extravagant confidence in the realisation of his hopes. An impatient scorn of contemporaries, and a fervent sympathy with all innovators, animate almost every page of his works; while his boastful confidence in his own knowledge, and in the mighty results that would be achieved could he once be allowed his own way, give a certain pathetic interest to his frustrated efforts. We learn from his casual indications that there was a group of independent thinkers, standing apart from the slothful ignorance of the many, and from the sterile activity of the scholastics, advocating greater freedom of thought and wider reach of inquiry, cultivating Mathematics and Physics, dreaming of great revolutions, and assailing the blind servility to texts and sentences. These were Roger Bacon's teachers and friends. Towering above them all is Robert Grossetete, bishop of Lincoln, a mathematician who despaired of Aristotle, and strove to find out for himself what the obscurity of translations kept hidden, who opposed the monks, opposed the pope, and impressed his

the objects and the mind, will be found in ROUSSELOT: *Études sur la phil. au moyen âge*, II. 250, and HAURÉAU: *De la phil. scolastique*, II. 177.

* ÉMILE CHARLES: *Roger Bacon, sa vie, ses ouvrages, ses doctrines d'après des textes inédites*. Paris, 1861.—ROGERI BACONIS: *Opera Inedita*, edited by J. S. BREWER. Published under direction of the Master of the Rolls. London, 1859. These, with the *Opus Majus*, edited by JEBB, furnish ample material. None of the accounts in the Histories of Philosophy are of value.

image on the popular mind, mingled with admiration and superstitious terror. A precursor of Bacon, he acquired the reputation of sorcerer; a precursor of Wiclif, he had called the pope Antichrist.*

Bacon early chose his career. While he regarded all the scholastics as barbarians in comparison with Aristotle and the Arabs, he was not prepared to accept even Aristotle as infallible. Experience was a surer guide; a little grammar and mathematics were preferable to all the metaphysic of the schools. He learned Greek, Arabic, Hebrew, Chaldaic—studied mathematics, alchemy, optics, and agriculture. He tells us that he had spent 2,000 livres in conducting experiments. People marvelled that he could survive his excessive labours. Unhappily, the fruits of forty years of study, fruits which in his estimation would feed the hungry world, it was his bitter lot to see himself forbidden to give out. In an evil hour he had joined the order of Franciscan monks. His superiors, either jealous, or alarmed at the tendencies they discovered, forbade his writing. If he ventured to instruct some curious brother, imprisonment on bread and water was his punishment, and his book was destroyed. He was treated like a disobedient schoolboy, or else like a suspected heretic. Books were refused him. If he attempted to teach his pupils how to calculate and to observe the stars, the influence of Satan was inferred.† Nor is it only in the Middle Ages that men reputed wise and undeniably pious have regarded the knowledge of Nature as indirectly aiding the designs of Satan, simply because such knowledge was not to be gained from the sources they were accustomed to regard as exclusively sacred. This will prepare us to understand how Pope Clement IV., desiring Bacon to send his work, nevertheless

* CHARLES: *Op. cit.* p. 7.

† M. CHARLES quotes an old ecclesiastical historian, who says that 'Friar Bungay was profoundly versed in mathematics, either through the inspiration of Satan, or the teaching of Roger Bacon.' Let me add the counter-statement of ROGER BACON, that the neglect of mathematics is the work of Satan: 'Et hoc diabolus procuravit quatenus radices sapientiæ humanæ ignorarentur.' *Opus Tertium* c. xx. p. 66.

while authorising him to disobey his superior (tibi per Apostolica scripta præcipiendo mandamus, quatenus, non obstante præcepto Prælati cujuscunque contrario, vel tui Ordinis constitutione quacunque) urged upon him the necessity of doing it secretly and hastily (et hoc quanto secretius poteris facias et indilate). The pope had scientific yearnings, and was very curious to know what Bacon had to impart; but he knew the temper of the age, and he knew the power of the Franciscans.*

The work Clement desired to have sent him was not yet written, as he supposed; but the expression of his desire was a welcome stimulus to Bacon, who replied, 'I feel myself elevated above my ordinary strength; I conceive a new fervour of spirit. I ought to be most grateful since your Beatitude has importuned me for that which I have most ardently desired to communicate, for that which I have laboured with immense toil, and brought into light after manifold expenses.' The task was rendered heavier by reason of his poverty. 'To place before Clement IV. a just account of researches carefully and continuously prosecuted for forty years,' says Mr. Brewer, 'required the free use of accomplished scribes, for whose services he could not look to his own Order. A laborious work on science and languages in the thirteenth century demanded a knot of accomplished transcribers possessed of more than average skill, who could construct tables, draw diagrams, and knew something of Greek and Hebrew. Where were such men to be procured?' Moreover, the pope had not ventured to interpose between Bacon and his superiors. 'You forgot,' wrote Bacon, 'to speak to my superiors in my excuse; and as I could not make known to them the secret, they threw obstacles in my way.' Nor was

* M. OZANAM: *Dante et la philos. catholique au 13ème siècle*, Louvain, 1847, p. 26, has a singularly misplaced sneer at the Reformers: 'Plus tard, et à l'époque de la Réforme, ses manuscrits furent brûlés dans l'incendie d'un couvent de son ordre, par des hommes qui prétendaient rallumer le flambeau de la raison éteint par les moines du moyen âge.' Without excusing the violence of the Reformers, we may at least absolve them from having wittingly destroyed works which the monks had done their utmost to prevent being written, and which their successors took care not to publish.

this the worst. 'There was another obstacle,' Bacon wrote, 'which had nearly proved subversive of the whole business; and that was want of money. For more than sixty French livres had to be expended . . . and your messengers would not lay out a single penny, although I told them I would send you word of the amount, and that every man's debt should be paid. You know that I have no money and can have none [as a Mendicant Friar], therefore I am prevented from borrowing.'

Yet his spirit was victorious over all obstacles. In eighteen months he had composed and written out for the pope the *Opus Majus*, *Opus Minus*, and the *Opus Tertium*. 'As an instance of immense labour and application almost superhuman,' says Mr. Brewer, 'these three answers to the demand of the pope must be reckoned among the most remarkable curiosities of literature, independently of their intrinsic merits.'* And while this poor student was thus miserably contending against external obstacles, his rivals Aquinas and Albertus Magnus were courted and aided by all temporal and clerical dignitaries. It was about this very time that 'Albert le Grand donnait à l'Empereur cette fastueuse hospitalité qui l'a rendu célèbre dans l'imagination populaire.'†

The fate of the works written under such disadvantages has been pitiable. Too much in advance of their age to be appreciated, they have only in quite modern times been rescued from the neglect and destruction too inevitably attending manuscripts. The *Opus Majus* was published by Jebb in 1733; and the *Opus Minus* and *Opus Tertium* first appeared no later than 1859. According to M. Charles, not a single doctor of the thirteenth and fourteenth centuries mentions Bacon either for blame or praise.* Such wide-sweeping statements must be received with hesitation; but we may infer at least that Bacon's name is so rarely cited as to warrant the biographer's statement that his influence was inappreciable. 'Ses idées, ensevelies dans ses manuscrits, devaient y rester près de trois cents ans jusqu'à ce qu'un autre

* BREWER: *Op. cit.* Preface, xlv.

† CHARLES: *Op. cit.* p. 31.

Bacon vint les reprendre pour son compte, y ajouter encore, et, mieux servi par les circonstances, les faire passer définitivement dans la science.'

On my first reading of the *Opus Majus* I was startled and delighted by what seemed the remarkable insight with which Bacon had anticipated several of the leading conceptions of positive philosophy. A more intimate familiarity toned down that surprise, and moderated that admiration, showing me that I had yielded to the common temptation of reading into ancient texts the views of modern thinkers. But even after the rectification of this erroneous impression, after an examination of Bacon's scientific ideas and pretended discoveries, which reduced their claims to a very modest rank (as I shall fully explain in the History of Science), there still remained the admiration for a vigorous thinker, one of the most remarkable of the neglected heroes of Humanity. Considered with reference to his contemporaries, he is a giant; and the comparison which spontaneously presents itself with his illustrious namesake, Francis Bacon, by no means diminishes his eminence.

It is indeed a point of singular interest that, in spite of there not being even the smallest probability of Francis Bacon having read a single page of Roger Bacon's work * (either in the originals, because they were unprinted, or at second hand, because they were never cited), a very curious list of parallel passages might be given, over and above the resemblances in doctrine. Had there been on external grounds the shadow of a probability, there would have been on internal grounds the strongest evidence of Francis Bacon's plagiarism; as it is, we are forced to admit a simple coincidence; unless a more comprehensive acquaintance with the literature of the Middle Ages should prove the resemblances to be traceable to a common source. Some of these,

* The tract *De Mirabil. Potest. Artis et Naturæ*, a translation of which appeared in 1618, FRANCIS BACON may have seen. At any rate he quotes one or two stories from it, with an expression of disbelief, in his *Hist. Vitæ et Mortis*; and elsewhere, in the *Temporis Partus Masculus*, he speaks slightly of his great namesake.

indeed, follow naturally from the antagonism against Aristotle and the Scholastic Method, which was the leading purpose of both. Having seen the vanity of the Syllogism they could only seek refuge in Experience. Having seen the wearisome inutility of Scholasticism, they could only insist with greater emphasis on the 'fruits,' and make Utility their aim. Having seen that men had all gone wrong, because all pursued a wrong Method, the suggestion of certain Idols of the mind was near at hand, and the nature of these Idols could not be very differently interpreted. Finally, having a supreme confidence in their own Method, it was natural that both should fall into the strange error of supposing that their Method would, so to speak, equalize men's minds, and render Science easily accessible to all.* It is less on such resemblances as these, though they arrest the reader, that a charge of plagiarism could be based, than on resemblances in expression (such as the *prerogatives* of Experiment) and in unimportant passages. I had drawn up a list of these, but cannot now find it; any diligent reader will notice several in the course of his study. Mr. Brewer alludes to them in his preface.†

Four great stumbling blocks to truth (*veritatis offendicula*) impede the inquirer's progress, according to Bacon, and these are: 1. The influence of fragile and unworthy authority, *fragilis et indignæ auctoritatis exemplum*. 2. Custom, *consuetudinis diuturnitas*. 3. The imperfection of undisciplined

* FRANCIS BACON's belief in his Method was extravagant; but ROGER surpassed him, declaring not only that he could teach a willing pupil in three or six months all that he had taken forty years to learn, but that *three days* would suffice for Hebrew or Greek. *Opus Tertium*, c. xx. p. 65. While I fully concur with Mr. SPEDDING in recognising but a faint resemblance between the 'offendicula' of ROGER and the 'idols' of FRANCIS, I altogether dissent from the judgment of Mr. ELLIS that 'the general resemblance between the spirit in which the two Bacons speak of science and its improvement is slight.' (*Bacon's Works*, I. 90.) It is precisely here that the resemblance seems to me to be striking.

† I do not reckon such resemblances as the famous epigram of FRANCIS BACON: 'Antiquitas seculi juvenus mundi,' the idea of which is clearly expressed by ROGER: 'quanto juniores tanto perspicaciores, quia juniores posteriores successione temporum ingrediuntur labores priorum.' *Opus Majus*, c. vi. p. 7, Venet. 1750. It would be impossible to assign the parentage of the thought; the felicity of the epigrammatic brevity is due to FRANCIS BACON.

senses, *vulgi sensus imperiti*. 4. The concealment of our ignorance by ostentation of our seeming wisdom, *proprie ignorantie occultatio cum ostentatione sapientie apparentis*.

It is on the evil influence of Authority that he is most copious and effective: *nam auctoritas solum allicit, consuetudo ligat, opinio vulgi obstinatos parit et confirmat*. He shows how fallible is the authority even of the wisest philosophers, and the most illustrious fathers, 'who were wise indeed, but not wise in their opposition to truth;' and he declares it to be a feeble argument which rests only on tradition, or the wisdom of our ancestors; rather we should infer that the older and commoner a belief, the greater the chance of its being a mere prejudice. Popular opinion excites his scorn. It was the mob that abandoned Jesus after following him for two years, and shouted 'Crucify him!' Philosophy has always been persecuted. Aristotle was calumniated, Avicenna persecuted, Averroes decried: 'whoever attempted to reform philosophy has been thwarted in every way; nevertheless truth has triumphed, and will triumph till the coming of Antichrist.'*

But let us not be precipitate, and conclude that Bacon held the views about Authority which are held by modern insurgents. Remember that it is a friar of the thirteenth century who is denouncing the evil influence of intellectual servility, and you will understand how he could in all sincerity add 'I do not allude to that truth and solid authority which by God's choice has been placed in the hands of the Church, or which the saintly philosophers and infallible prophets have acquired by their own merit. Elsewhere he places the remedy for the evils first in the study of that only perfect wisdom which is found in the Scriptures, and secondly in the study of Mathematics, and the use of Experiment. This combination of Scripture and Mathematics, so incomprehensible to us, had nothing startling to a man of that age. The infallibility of the Church was not to be shaken off in a day. The idea of

* *Opus Majus*, p. 10. Comp. *Opus Tertium*, c. ix. p. 28. 'Certo multi fuerunt sancti et boni inter Judæos quando crucifixus est Dominus, et tamen omnes dimiserunt Enm.'

Scripture not containing all wisdom is an idea which has very slowly made its way. Moreover in the state of ignorance, which was the state of the wisest in the thirteenth century, we cannot doubt Bacon's sincerity when he exclaims: 'What man knows is little and worthless in respect of that which he believes without knowing; and still less in respect of that which he does not know. Mad is he who thinks much of his wisdom; maddest he who exhibits it as something marvellous.'*

It is to be noted that Bacon always insists on the harmony of revelation and reason, and stigmatizes the distinction which was then daily growing in credit, of truth according to Scripture and truth according to Philosophy. They are vile heretics who make this distinction: 'mentiuntur tanquam vilissimi heretici;' that which is false in philosophy cannot be true elsewhere. 'Nam quicquid est contrarium sapientie Dei vel alienum est erroneum et inane, nec potest humano generi valere.' Therefore all wisdom is to be found in Scripture, and drawn from thence by Philosophy and the Canon Law.† Nevertheless, while Bacon thus vindicates the authority of Scripture, he is firm in asserting the integrity of Philosophy, which he regards as revealed by God, and as needed for the perfect fulfilment of Scripture. Indeed we may say that although unhesitatingly accepting the dogmas of Christianity, he everywhere accepts them because they are true, and not because they claim the authority of the Fathers: against that authority he is always ready to oppose the verdicts of reason.

Dr. Whewell declares the existence of Roger Bacon's work to be a problem which has never yet been solved;‡ so greatly was it in advance of the age. I think that had the historian been somewhat better acquainted with the writings then

* 'Pauca enim sunt et vilia respectu eorum quæ non intelligit sed credit, et longe pauciora respectu eorum quæ ignorat. Et quoniam respectu eorum quæ scit homo restant infinita quæ ignorat: insanus est qui de sapientia se extollit, et maxime insanit qui ostentat et tanquam portentum suam scientiam nititur divulgare.' *Opus Majus*, p. 11.

† *Opus Tertium*, c. xxiii.-iv.

‡ WHEWELL: *Hist. of the Inductive Sciences*, 3rd ed. I. 366.

current, especially with the Arabian writings from which Bacon drew so largely, he would have seen a ready solution of this problem. I am myself but very superficially acquainted with these writings, yet I have discovered evidence enough to make the position of Roger Bacon quite explicable without in the least denying him extraordinary merit. Some of the most striking thoughts of Bacon I have found in Avicenna and Averroes, and in passages cited by Bacon himself. Nevertheless it is a point of great interest to see how this friar in the thirteenth century had assumed the positive attitude, and several of the positive principles. The luminous distinction between Abstract and Concrete Sciences had not altogether escaped him. The important principle that each order of conceptions should be independent—'in nulla facultate extranea debet dominari'—was seized by him at a time when Albertus Magnus protested against the introduction of Mathematics into Physics; and when the ignorance of the Fathers had discredited the study, Roger Bacon made it the basis of all science—*alphabetum philosophiæ*: a conception, as Dr. Whewell remarks, in which he is superior to Francis Bacon. At a time when the Syllogistic Method was supreme, he could not only laugh at it, and disclose its incompetence, he was ready to replace it with the Scientific Method and its two handmaidens Mathematics and Experiment. 'In every science,' he said, 'we must follow the best method, and that is to study each part in its due order, placing that first which is properly at the commencement, the easy before the difficult, the general before the particular, the simple before the complex. And the exposition must be demonstration. This is impossible without experiment. We have three means of knowledge: Authority, Reasoning, and Experiment. Authority has no value unless its reason be shown; it does not teach, it only calls for assent. In Reasoning we commonly distinguish a sophism from a demonstration by verifying the conclusion through experiment.' He is constantly insisting on the necessity of Verification, and on the futility of argument.*

* See especially *Opus Majus*, p. 336-7, over and above the well-known passages; and *Opus Tertium*, c. xiii.

Experimental Science is the mistress of the speculative sciences, and has three great Prerogatives. First, she tests and verifies the conclusions of other sciences. Secondly, she discovers in the notions which other sciences deal with, magnificent results to which these sciences are incompetent. Thirdly, she investigates the secrets of nature by her own powers.' His clear insight is displayed in the recognition of an essential connection of all the sciences. Comte himself might have written this passage: 'Omnes scientiæ sunt connexæ, et mutuis se fovent auxiliis, sicut partes ejusdem totius, quarum qualibet opus suum peragit, non solum propter se, sed pro aliis.'*

We may echo Mr. Brewer's remark: 'If the world loves to contemplate the great Lord Chancellor of James I. retiring from the court or the parliament to his museum at Gray's Inn or Gorbamby, laying aside his chancellor's robe to watch the furnace or count the drops from the alembic, the example of the solitary friar with more scanty means and fewer associates justifying the value of experiment, in a darker and less favourable age, is not less interesting. So far as the prize is to be given to mere invention, Roger Bacon has superior claims to Lord Bacon.'†

He had a distinct idea of a science which should be a *prima philosophia*, constituted of all the fixed and universal Laws of Nature. In the study of this he repudiates as idle the search after Forms and Species, and seeks only the uniform agencies which are reducible to law. He ridicules the method of his day on which physical questions were solved by reason, *rationaliter*. If you ask one of these doctors what is the cause of Combustion, he can only answer you that the cause is occult.

* *Opus Tertium*, c. iv. p. 18.

† Mr. BREWER is less happy in his criticism of Roger Bacon when he says: 'though in his practice a keen and sagacious experimentalist, in his exposition of science he adopted the deductive in opposition to the inductive method.' In the first place Roger Bacon never expounded a science, but only his general views of science; and in the next place, the inductive method may be the best method of research, but the deductive is the method of exposition.

A closer examination of Bacon's writings would demand a long chapter. Such a chapter would display the incompleteness of his conceptions, the vagueness of his Method, and the strange credulity which in those days even his independent mind could not escape.

§ IV. OCCAM.

Roger Bacon left no school. He was too much in advance of his age; or rather he was too much in advance of the philosophical authorities to gain from them a proper recognition. The Scholasticism he opposed was still triumphant. The theologians opposed him because he inculcated Observation and discredited Authority. The philosophers were willing enough that he should attack Authority, but were not willing to listen to the same attacks upon their syllogistic method. They were not better disposed towards Observation and Experiment than the theologians were. To this day the inductive Method is distasteful to metaphysicians. Duns Scotus rose into rivalry with Aquinas, and the adverse sects of Thomists and Scotists filled Europe with their noisy disputes. Observation and Experiment instead of being practised were condemned as dangerous. In 1243 the Dominicans interdicted the study of medicine and all physical inquiry. In 1287, Chemistry was found to be dangerous.

The gradual development of Philosophy made it clear that Aristotle could not be reconciled with several fundamental tenets of the Church. To save both, a distinction between the two kinds of truth was invented; and men taught the truth according to the Church and the truth according to Philosophy, as two parallel and independent lines. This could not last. Scholasticism was hastening to its end, and it received its death blow from our brilliant and rebellious countryman William of Occam, who wrote vigorously against the temporal power of the Pope, and triumphantly against some metaphysical errors of the schools. This was in the early part of the fourteenth century.

Occam, according to M. Hauréau, is a writer of transparent candour, who says what he means without equivocal. He is a freethinker, separating questions of reason from questions of faith, and not permitting the latter to embarrass the former. If the question arises as to the Divine intelligence being the first efficient cause of all that exists, he replies that as a philosopher he knows nothing about it, experience not instructing us in what way the cause of causes acts, and reason having neither the power nor the right to penetrate the divine sanctuary.

With Occam the doctrine of Realism came to an end. His advocacy of Nominalism was irresistible; and indeed it may all be said to be implied in his famous maxim about not multiplying entities. The multiplication of entities had gone on with immense fecundity in the schools. Wherever a phenomenon could be discerned an entity had to be invented to account for it—*oportet ponere aliquod agens*. But Occam showed the weakness of this recourse; and to use the language of M. Hauréau, 'Guillaume d'Ockham n'est pas seulement le chef d'une grande école; son influence sur les écoles adverses a été considérable: comme il rappelait dans les voies de la réalité les esprits fatigués de leurs vaines et laborieuses enquêtes dans les sphères du possible, son appel devait être, a été favorablement accueilli. Au treizième siècle, l'étude de la philosophie était une passion ardente, à laquelle on était prêt à faire beaucoup de sacrifices; mais toutes les passions, même les plus généreuses, recherchent leur fin avec une ardeur déréglée: dès le commencement du quatorzième, on voit plus de calme dans les intelligences, et, comme elles reconnaissent la nécessité d'une méthode, elles sont disposées d'elles-mêmes à suivre le nouveau guide qui se présentera pour les conduire. Ce guide ce fut Guillaume d'Ockham.'

§ V. THE REVIVAL OF LEARNING.

The gathering forces of the new era may be most readily indicated by an enumeration of such names as Giotto, Dante,

Petrarch, Boccaccio, Chaucer, Froissart, Tauler, Wiclif—men whose greatest labours fall within this fourteenth century; and towards its close we must add the gradual influx of Greek scholars—Barlaam, Chrysoloras, Gaza, Bessarion, and George of Trebizond, whose learning and enthusiasm gave a new direction to philosophical speculation, and opened the treasures of classic wisdom.

With the revival of learning, after the fall of Constantinople, came fresh streams of Grecian influence. The works of Plato became generally known; under Marsilio Ficino—to whom we owe the Latin translation of Plato*—a school of Platonists was formed, which continued to divide, with the school of Aristotle, the supremacy of Europe, under new forms, as before it had divided it under the form of Realism. The effect of this influx of Grecian influence, at a period when Philosophy was emancipating itself from the absolute authority of the Church, was to transfer the allegiance from the Church to Antiquity. To have suddenly cast off all authority would have been too violent a change; and it may on the whole be regarded as fortunate for human development that Philosophy did so blindly accept the new authority—one altogether *human*, yet without deep roots in the life of the nation, without any external constituted power, consequently very liable to disunion and disruption, and certain to give way before the necessary insurgence of Reason insisting on freedom.

There is something profoundly rational in the principle of Authority, when not exercised despotically, and something essentially anarchical in the principle of Liberty, when not restrained within due limits. Both Authority and Liberty are necessary principles, which only in misuse become paralyzing or destructive. It may be made perfectly clear to the rational mind that as Comte says there can be no such thing as 'liberty of private judgment' in Mathematics, Astronomy, Physics, Chemistry, or any other science the truths of which

* In many respects our best guide to Plato's meaning where he is most obscure. It is printed in Bekker's edition.

have been established; the person ignorant of these sciences does, and must, take upon trust the statements made by those who are authorities; he cannot indulge his 'private judgment' on the matter, without forfeiting the respect of those who hear him. Does this mean that all men are bound blindly to accept what astronomers and chemists assert? No; to require such submission of the judgment, is to pass beyond the principle of Authority, and assume that of Despotism. The principle of Liberty assures entire freedom to intellectual activity, warrants the control of Authority, and incites men to control it by submitting its positions to those elementary tests by which it was itself originally constituted. If I have made a series of experiments which have led to the disclosure of an important truth, your liberty of private judgment is mere anarchy if it assert itself in denying the truth simply out of your own pre-conceptions; but it is healthy freedom if it assert itself in denying the truth after having submitted my authority to its original tests (those experiments, namely, which gave it authority), and after detecting some error in my experimentation, or some inaccuracy in my induction. The authoritative statement of Sir Charles Bell, repeated by every other anatomist, respecting the separate functions of the anterior and posterior columns of the spinal cord, was one which permitted no liberty of private judgment, but did permit liberty of private verification; and when M. Brown-Séquard repeated the original experiments and proved the former conclusions to be erroneous,* his authoritative statement replaced that of previous anatomists, and will continue to replace it, until it has undergone a similar defeat through the process of verification.

If this is a correct view, it will enable us to understand the long continuance of Aristotle's authority, which coerced the minds of men as the authority of one confessedly a master in his art, and one whose positions would not easily be brought to the test of verification. Hence, as Bayle says,

* See *Mémoires de la Société de Biologie*. 1855.

the method employed was first to prove every thesis by authority, and next by arguments; the proofs by authority were passages from Aristotle; the arguments went to show that these passages, rightly interpreted, meant what the thesis meant.

Other causes contributed to foster this reverence for Authority; only one cause could effectually destroy it, and that was the rise of positive Science, which, by forcing men to verify every step they took, led them into direct antagonism with the ancients, and made them choose between the new truth and the old dogma. As Campanella—one of the reforming thinkers—acutely saw, ‘the reforms already made in philosophy must make us expect its complete change; and whoever denies that the Christian mind will surpass the Pagan mind, must also deny the existence of the New World, the planets and the stars, the seas, the animals, the colonies, the modern sects and the new cosmography.’* It does not come within our purpose here to trace the rise and development of Science; we therefore pass at once to the philosophical insurgents against the authority of Aristotle and the Church well typified in Giordano Bruno.

§ VI. GIORDANO BRUNO.

On the 17th of February, 1600, a vast concourse of people was assembled in the largest open space in Rome, gathered together by the irresistible sympathy which men always feel with whatever is terrible and tragic in human existence. In the centre stood a huge pile of faggots; from out its logs and branches rose a stake. Crowding round the pile were eager and expectant faces, men of various ages and of various characters, but all for one moment united in a common feeling of malignant triumph. Religion was about to be avenged; a heretic was coming to expiate on that spot the crime of open defiance to the dogmas proclaimed by the Church—the crime of teaching that the earth moved, and that there was an infinity of worlds. The stake is erected

* Quoted by M. RENOUVIER, *Manuel de Philos. Moderne*, p. 7.

for the ‘maintenance and defence of the Holy Church, and the rights and liberties of the same.’*

Whom does the crowd await? Giordano Bruno—the poet, philosopher, and heretic—the teacher of Galileo’s heresy—the friend of Sir Philip Sidney, and open antagonist of Aristotle. A hush comes over the crowd. The procession solemnly advances, the soldiers peremptorily clearing the way for it. His face is placid though pale. They offer him the crucifix; he turns aside his head—he *refuses to kiss it!* ‘The heretic!’ They show him the image of Him who died upon the cross for the sake of the living truth—he refuses the symbol! A yell bursts from the multitude.

They chain him to the stake. He remains silent. Will he not pray for mercy? Will he not recant? Now the last hour is arrived—will he die in his obstinacy, when a little hypocrisy would save him from so much agony? It is even so: he is stubborn, unalterable. They light the faggots; the branches crackle; the flame ascends; the victim writhes—and now we see no more. The smoke envelopes him; but not a prayer, not a plaint, not a single cry escapes him.—In a little while the wind has scattered the ashes of Giordano Bruno.

The martyrdom of Bruno has preserved his name from falling into the same neglect as his writings. Most well-read men remember his name as that of one who, whatever his errors might have been, perished a victim of intolerance. But the extreme rarity of his works, aided by some other causes into which it is needless here to enter, has, until lately, kept even the most curious from forming any acquaintance with them. The rarity of the writings made them objects of bibliopolic luxury: they were the black swans of literature. Three hundred florins were paid for the *Spaccio* in Holland, and thirty pounds in England. Jacobi’s mystical friend, Hamann, searched Italy and Germany in vain for the dialogues *De la Causa* and *De l’ Infinito*. But in 1830, Herr Wagner, after immense toil, brought out his valuable edition

* Words quoted by Prof. DE MORGAN from a writ of JAMES THE FIRST.

of the Italian works, and since then students have been able to form some idea of the Neapolitan thinker.*

Giordano Bruno was born at Nola, in La Terra di Lavoro, a few miles from Naples, and midway between Vesuvius and the Mediterranean.† The date of his birth is fixed as 1550—that is to say, ten years after the death of Copernicus,—whose system he was to espouse with such ardour,—and ten years before the birth of our own illustrious Bacon. Tasso well says :

‘La terra
Simili a sè gli abitator’ produce;’

and Bruno was a true Neapolitan child—as ardent as its volcanic soil, burning atmosphere, and dark thick wine (*mangiaguerra*)—as capricious as its varied climate. There was a restless energy which fitted him to become the preacher of a new crusade—urging him to throw a haughty defiance in the face of every authority in every country,—an energy which closed his wild adventurous career at the stake. He was also distinguished by a rich fancy, a varied humour, and a chivalrous gallantry, which constantly remind us that the athlete is an Italian, and an Italian of the sixteenth century. Stern as was the struggle, he never allowed the grace of his nature to be vanquished by its vehemence. He went forth as a preacher; but it was as a preacher young, handsome, gay, and worldly—as a poet, not as a fanatic.

The first thing we hear of him is the adoption of the Dominican’s frock. In spite of his ardent temperament, full of vigorous life he shuts himself up in a cloister,—allured, probably, by the very contrast which such a life offered to his own energetic character. Bruno in a cloister has but two courses open to him: either all that affluent energy will rush into some stern fanaticism, and, as in Loyola, find aliment in perpetual self-combat, and in bending the wills of others to

* *Opere di Giordano Bruno, Nolano, ora per la prima volta raccolte e pubblicate da Adolfo Wagner.* 2 vols., Leipzig, 1830.

† For the biographic details I am mainly indebted to the valuable work of M. CHRISTIAN BARTHOLMESS, entitled *Jordano Bruno*, 2 vols., Paris, 1848.

his purposes; or else his restless spirit of inquiry, stimulated by avidity for glory, will startle and irritate his superiors. It was not long ere the course was decided. He began to doubt the mystery of transubstantiation. Nay more: he not only threw doubt upon the dogmas of the Church, he had also the audacity to attack the pillar of all faith, the great authority of the age—Aristotle himself. The natural consequences ensued—he was feared and persecuted. Unable to withstand his opponents, he fled. Casting aside the monkish robe, which clothed him in what he thought a falsehood, he fled from Italy at the very time when Montaigne, having finished the first part of his immortal Essays, entered it, to pay a visit to the unhappy Tasso, then raving in an hospital.

Bruno was now an exile, but he was free; and the delight he felt at his release may be read in several passages of his writings, especially in the sonnet prefixed to *L’ Infinito* :

‘Uscito di prigione angusta e nera,
Ove tanti anni error stretto m’ avvinse:
Quà lascio la catena, che mi cinse,
La man di mia nemica invida e fera,’ etc.

He was thirty years of age when he began his adventurous course through Europe—to fight single-handed against much of the falsehood, folly, and corruption of his epoch. Like his great prototype, Xenophanes, who wandered over Greece a rhapsodist of philosophy striving to awaken mankind to a recognition of the Deity whom they degraded by their dogmas, or like his own unhappy rivals, Campanella and Vanini, Bruno became the knight-errant of truth, ready to combat all comers in its cause. His life was a battle without a victory. Persecuted in one country, he fled to another—everywhere sowing the seeds of revolt, everywhere shaking the dynasty of received opinion. It was a strange time,—to every earnest man, a sad and almost hopeless time. The Church was in a pitiable condition—decaying from within, and attacked from without. In general the lower clergy were degraded by ignorance, indolence, and sensuality; the prelates, if more enlightened, were enlightened only as epicures and pedants, swearing by the Gods of Greece and

Rome, and laboriously imitating the sonorous roll of Ciceroian periods. The Reformation had startled the world, especially the ecclesiastical world. The Inquisition was vigilant and cruel; but among its very members there were sceptics. Scepticism, with a polish of hypocrisy, was the general disease. It penetrated almost everywhere—from the cloister to the cardinal's palace. Scepticism, however, is only a transitory state. In all ages, we see it stimulating new reforms. Reformers were not wanting in the sixteenth century. Of the Lutheran movement it is needless here to speak. The sixteenth century marks its place in history as the century of revolutions: it not only broke the chain which bound Europe to Rome, it also broke the chain which bound philosophy to Scholasticism and Aristotle. It set human reason free; it proclaimed the liberty of thought and action. In the vanguard of its army, we see Telesio, Campanella, and Bruno, men who must always excite our admiration and our gratitude for their cause and for their courage. They fell fighting for freedom of thought and utterance—the victims of a fanaticism the more odious because it was not the rigour of belief, but of *pretended* belief. They fought in those early days of the great struggle between science and prejudice, when Galileo was a heretic, and when the implacable severity of dogmatism baptized in blood every new thought born into the world.

One spirit is common to all these reformers, however various their doctrines: the spirit of unhesitating opposition to the dominant authority. In the fifteenth century men were occupied with the newly-awakened treasures of ancient learning: it was a century of erudition; the past was worshipped at the expense of the present. In art, in philosophy, and in religion, they sought to restore the splendours of an earlier time. Brunelleschi, Michael Angelo, Raphael, disdaining the types of Gothic art; strove to recall once more the classic type. Marsilio Ficino, Mirandola, Telesio, and Bruno, discarding the subtleties and disputes of Scholasticism, endeavoured to reproduce Pythagoras, Plato, and Plotinus.

In religion, Luther and Calvin, avowedly rising against Papal corruptions, laboured to restore the Church to its primitive simplicity. Thus the new era seemed retrograde. It is often so. The recurrence to an earlier time is the preparation for a future. We cannot leap far, leaping from the spot where we stand; we must step backwards a few paces to acquire momentum.

Giordano Bruno ceaselessly attacked Aristotle. In so doing he knew that he grappled with the Goliath of the Church. Aristotle was a synonym for reason. An anagram was made of his name, 'Aristoteles: *iste sol erat*.' His Logic and Physics, together with the Ptolemaic system of astronomy, were then considered as inseparable portions of the Christian creed. In 1624—a quarter of a century after Bruno's martyrdom—the Parliament of Paris issued a decree banishing all who publicly maintained theses against Aristotle; and in 1629, at the urgent remonstrance of the Sorbonne, decreed that to contradict the principles of Aristotle was to contradict the Church! There is an anecdote recorded somewhere of a student, who, having detected spots in the sun, communicated his discovery to a worthy priest: 'My son,' replied the priest, 'I have read Aristotle many times, and I assure you there is nothing of the kind mentioned by him. Go rest in peace; and be certain that the spots which you have seen are in your eyes, and not in the sun.' When Ramus solicited the permission of Beza to teach in Geneva, he was told, 'the Genevese have decreed once for all, that neither in logic, nor in any other branch of knowledge, will they depart from the opinions of Aristotle—*ne tantillum quidem ab Aristotelis sententiâ deflectere*.' It is well known that the Stagirite narrowly escaped being canonized as a Saint. Are you for or against Aristotle? was the question of philosophy; and the piquant aspect of this ἀριστοτελεσμαχία is the fact that both parties were often ignorant of the real opinions of the Stagirite; attributing to him indeed doctrines the very reverse of those which a more ample knowledge of his writings has shown him to have taught.

Bruno, as we said, took his stand opposite to the Aristotelians. Pythagoras, Plato, Plotinus, and Lucretius were his teachers. Something of temperament may have originated this; for Bruno undoubtedly belongs to that class of thinkers in whom Logic is but the handmaid of Imagination and Fancy. To him the Aristotle of that age was antipathetic. The Aristotelians taught that the world was finite, and the heavens incorruptible. Bruno declared the world to be infinite, and subject to an eternal and universal revolution. The Aristotelians proclaimed the immobility of the earth: Bruno proclaimed its rotation. Such open dissidence could of course only enrage the party in power. It would have been sufficiently audacious to promulgate such absurdities—*horrenda prorsus absurdissima*—as the rotation of the earth; but to defy Aristotle and ridicule his logic, could only proceed from the audacity of impiety. So Bruno had to fly.

To Geneva he first directed his steps. But there the power which had proved stronger than the partisans of Servetus, was still dominant. He made his escape to Toulouse; there he raised a storm among the Aristotelians, such as compelled him to fly to Paris, the streets of which were still slippery with the blood of the Eve of St. Bartholomew. It would not have been surprising had he been butchered without mercy; but, by some good fortune, he obtained the favour of Henry III., who not only permitted him to lecture at the Sorbonne, but offered to admit him as a salaried professor, if he would but attend Mass. Is it not strange that at a time when attendance at Mass was so serious a matter,—when the echoes of that lugubrious cry, *la Messe ou la mort!* which had resounded through those narrow murky streets, must have been still ringing in men's ears,—Bruno, in spite of his refusal, not only continued to lecture, but became exceedingly popular? Since Abelard had captivated the students of Paris with his facile eloquence and startling novelties, no teacher had been so enthusiastically received as Bruno. Young, handsome, eloquent, and facetious, he charmed by his manner no less than by his matter. Adopting by turns every form of address—rising

into the acrial altitudes of imagination, or descending into the kennel of obscenity and buffoonery—now grave, prophet-like, and impassioned—now fierce and controversial—now fanciful and humorous—he threw aside all the monotony of professional gravity, to speak to them as a man. He did not on this occasion venture openly to combat the prejudices and doctrines of the age; that was reserved for his second visit, after he had learned in England to speak as became a free and earnest man.

On the misty banks of our noble Thames, he was rudely initiated into the brutality of the English character; but he was amply compensated by his reception at the Court of Elizabeth, where a friendly welcome awaited all foreigners—especially Italians. Nor was his southern heart cold to the exquisite beauty and incomparable grace of our women. England was worth visiting; and he had reason to refer with pride to 'questo paese Britannico a cui doviamo la fedeltà ed amore ospitale.' It was in England he published the greater part of his Italian works. It was here perhaps that the serenest part of his life was spent. Patronised by the Queen ('l'unica Diana qual è tra voi, qual che tra gli astri il sole,' as he calls her), he had the glory and the happiness to call Sir Philip Sidney friend.

In the high communion of noble minds, in the interchange of great thoughts and glorious aspirations, another than Bruno might have been content to leave the world and all its errors in peace; but he had that within him which would not suffer him to be at rest. He could not let the world wag on its way, content to smile at its errors. He was a soldier, and had his battles to fight. In the society of Sir Philip Sidney, Sir Fulke Greville, Dyer, Harvey, and most probably of Antonio Perez and Shakspeare's Florio, Bruno *might* have discussed with calmness every question of philosophy, had he been of an epicurean turn—had he not been Bruno. As it was, lured by his passion for publicity—by his vanity no less than by his love of truth—he rushed into the arena.

It was not very long after his arrival in England (1583) that Leicester, then Chancellor of Oxford, gave that splendid *fête* in honour of the Count Palatine Albert de Lasco, of which the annals of Oxford and the works of Bruno have preserved some details. In those days a foreigner was 'lionized' in a more grandiose style than modern Amphitryons attempt. It was not deemed sufficient to ask the illustrious stranger to breakfast; there were no dinners given in public, or at the club. The age of tournaments had passed away; but there were still public discussions, which were a sort of passage-of-arms between the knights of intellect. And such a tourney had Leicester prepared in honour of the Pole. Oxford called upon her doughty men to brighten up their arms,—that is to say, to shake the dust from their volumes of Aristotle. All comers were challenged. Bruno stepped into the arena. Oxford chose her best men to combat for Aristotle and Ptolemy. On that cause her existence seemed to depend. Her statutes declared that the Bachelors and Masters of Arts who did not faithfully follow Aristotle were liable to a fine of five shillings for every point of divergence, or for every fault committed against the *Organon*. Bruno wittily called Oxford the *widow* of sound learning—'la vedova di buone lettere.'

The details of this wit combat are unknown to us. Bruno declares that fifteen times did he stop the mouth of his pitiable adversary, who could only reply by abuse.* But there is considerable *forfanterie* about the Neapolitan, and such statements must be received with caution. That he created a 'sensation' we have no doubt; his doctrines were sufficiently startling. We also find him, on the strength of

* 'Andate in Oxonia e fatevi raccontar le cose intravenute al Nolano quando pubblicamente disputò con que' dottori in teologia in presenza del Principe Alasco Polacco, et altri de la nobilità inglese! Fatevi dire come si sapea rispondere a gli argomenti, come restò per quindici sillogismi quindici volte qual pulcino entro la stoppa quel povero dottor, che come il corifeo de l' accademia ne puosero avanti in questa grave occasione! Fatevi dire con quanta inciviltà e discortesia procedea quel porco, e con quanta pazienza et umanità quell' altro, che in fatto mostrava essere Napoletano, nato et allevato sotto più benigno cielo!'—*La Cena de le Ceneri*: BRUNO: *Opp. Ital.* ii. 179.

that success, soliciting permission of the Oxford Senate to profess openly. With his usual arrogance he styles himself, in this address, as a 'doctor of a more perfect theology, and professor of a purer wisdom,' than was there taught. Strange as it may appear, permission was granted; probably because he had the patronage of Elizabeth. He lectured on cosmology, also on the immortality of the soul: a doctrine which he maintained, not upon the principles of Aristotle, but upon those of the Neo-Platonists, who regarded this life as a brief struggle, a sort of agony of death, through which the soul must pass ere it attains to the splendour of existence in the eternal and universal life: the conviction of our future existence is given in the deep unquenchable desire which is within us to unite ourselves with God, and to quit this miserable sphere for the glorious regions of eternity. No doubt he preached this doctrine with stirring eloquence; but it must have sounded very heterodox in the ears of that wise conclave—styled by Bruno 'a constellation of pedants, whose ignorance, presumption, and rustic rudeness would have exhausted the patience of Job;' and they soon put an end to his lectures.

We have already indicated the protection which Elizabeth accorded him, and which he repaid by adulation, extravagant enough, but which was then the current style in speaking of royalty; and it should not be forgotten that this praise of a Protestant Queen was not among the least of his crimes in the eyes of his accusers. Still, even Elizabeth could not protect a heretic; and Bruno's audacious eloquence roused such opposition that he was forced to quit England. He returned to Paris, once more to court the favour of the *Quartier Latin*. He obtained permission to open a public disputation on the Physics of Aristotle. For three successive days did this dispute continue, in which the great questions of nature, the universe, and the rotation of the earth were discussed. Bruno had thrown aside the veil, and presented his opinions naked to the gaze. His impetuous onslaught upon established opinions produced the natural result; he was forced again to fly.

We next find him in Germany, carrying the spirit of innovation into its august universities. In July, 1586, he matriculated as *theologiæ doctor Romanensis* in the university of Marburg, in Hesse; but permission to teach philosophy was refused him *ob arduas causas*. Whereupon he insulted the Rector in his own house, created a disturbance, and insisted that his name should be struck off from the list of members of the university. He set off for Würtemberg. His reception in this centre of Lutheranism was so gratifying, that he styled Würtemberg the Athens of Germany. 'Your justice,' he writes to the Senate, 'has refused to listen to the insinuations circulated against my character and my opinions. You have with admirable impartiality permitted me to attack with vehemence that philosophy of Aristotle which you prize so highly.' For two years did he teach there with noisy popularity, yet on the whole with tolerable prudence in not speaking against the peculiar views of Lutheranism. He even undertook a defence of Satan; but whether in that spirit of pity which moved Burns, or whether in the spirit of buffoonery which delights to play with awful subjects, we have no means of ascertaining. He did not offend his audience, in whatever spirit he treated the subject.

Here, then, in Würtemberg, with admiring audiences and free scope for discussion, one might fancy he would be at rest. Why should he leave so enviable a position? Simply because he was not a man to rest in ease and quiet. He was possessed with the spirit of a reformer, and this urged him to carry his doctrines into other cities. Characteristic of his audacity is the next step he took. From Würtemberg he went to Prague; from the centre of Lutheranism to the centre of Catholicism! In this he had reckoned too much on his own powers. He met with neither sympathy nor support in Prague. He then passed on to Helmstadt, where his fame having preceded him, the Duke of Brunswick conferred upon him the honourable charge of educating the hereditary Duke. Here again, if he had consented to remain quiet, he might have been what the world calls successful;

but he was troubled with convictions—things so impedimental to success!—and these drew down upon him a sentence of excommunication. He justified himself, indeed, and the sentence was removed: but he was not suffered to remain in Helmstadt; so he passed to Frankfort, and there in quiet, brief retirement published three of his Latin works. Here a blank occurs in his annals. When next we hear of him he is at Padua.

After an absence of ten years, the wanderer returns to Italy. In his restless course he has traversed Switzerland, France, England, and Germany; his hand against every man, and every man's hand against him. Heretic and innovator, he has irritated the clergy without securing the protection of philosophers. He has sought no protection but that of truth. That now he should choose Padua above all places, must excite astonishment. Padua, where Aristotle reigns supreme! Padua, overshadowed by Venice and the Inquisition! Was he weary of life, that he thus marched into the camp of his enemy? or did he rely on the force of his convictions and the vigour of his eloquence to triumph even in Padua? None can say. He came—he taught—he fled. Venice received him—but it was in her terrible prison. Lovers of coincidences will find a piquant illustration in the fact that at the very moment when Bruno was thrown into prison, Galileo opened his course of mathematics at Padua; and the six years which Galileo occupied that mathematical chair, were the six years Bruno spent in miserable captivity.

Bruno's arrest was no sooner effected than intimation of it was sent to the Grand Inquisitor San Severino, at Rome, who ordered that the prisoner should be sent to him, under escort, on the first opportunity. Thomas Morosini presented himself before the *Savi* of Venice, and demanded, in the name of his Eminence, that Bruno should be delivered up to him. 'That man,' said he, 'is not only a heretic, but an heresiarch. He has written works in which he highly lauds the Queen of England, and other heretical princes. He has

written diverse things touching religion, which are contrary to the faith.' The *Savi*, for some reason or other, declined to give up their prisoner, saying the matter was too important for them to take a sudden resolution. Was this mercy? Was it cruelty? In effect, it was cruelty; for Bruno languished six years in the prisons of Venice, and only quitted them to perish at the stake. Six long years of captivity—worse than any death. To one so ardent, solitude itself was punishment. He wanted to be among men, to combat, to argue, to live; and he was condemned to the fearful solitudes of that prison, without books, without paper, without friends. Such was the repose which the weary wanderer found on his native soil.

His prison doors were at length opened, and he was removed to Rome, there to undergo a tedious and fruitless examination. Of what use was it to call upon him to retract his opinions? The attempt to convince him was more rational; but it failed. The tiresome debate was needlessly prolonged. Finding him insensible to their threats and to their logic, they brought him, on the 9th of February, to the palace of San Severino; and there, in the presence of the cardinals and most illustrious theologians, he was forced to kneel and receive the sentence of excommunication. That sentence passed, he was handed over to the secular authorities, with a recommendation of a 'punishment as merciful as possible, and without effusion of blood'—*ut quam clementissimè et citra sanguinis effusionem puniretur*,—the atrocious formula for burning alive.

Calm and dignified was the bearing of the victim during the whole of this scene. It impressed even his persecutors. On hearing his sentence, one phrase alone disturbed the unalterable serenity of his demeanour. Raising his head with haughty superiority, he said, 'I suspect you pronounce this sentence with more fear than I receive it.' A delay of one week was accorded to him, in the expectation that fear might force a retraction; but the week expired, and Bruno remained immovable. He perished at the stake; but he died

in the martyr spirit, self-sustained and silent, welcoming death as the appointed passage to a higher life.

'Fendo i cieli e a l' infinito m' ergo.'

Bruno perished the victim of intolerance. It is impossible to read of such a punishment without strong indignation and disgust. There are, indeed, no pages in the annals of mankind which we would more willingly blot out, than those upon which fanaticism has written its bloody history. Frivolous as have often been the pretexts for shedding blood, none are more abhorrent to us than those founded upon religious differences. Surely the question of religion is awful enough in itself. Men have the deepest possible interest in ascertaining the truth of it: and if they cannot read the problem aright by the light of their own convictions, will it be made more legible by the light of an *auto-da-fé*? Tolerance is still far from being a general virtue; but what scenes of struggle, of violence, and of persecution has the world passed through, before even the present modicum of tolerance could be gained! In the sixteenth century, free thought was a crime. The wisest men were bitterly intolerant; the mildest, cruel. Campanella tells us that he was fifty times imprisoned, and seven times put to the torture, for daring to think otherwise than those in power. It was indeed the age of persecution. That which made it so bloody was the vehemence of the struggle between the old world and the new—between thought and established dogma—between science and tradition. In every part of Europe—in Rome itself—men uprose to utter their new doctrines, and to shake off the chains which enslaved human intellect. It was the first great crisis in modern history, and we read its progress by the bonfires lighted in every town. The glare of the stake reddened a sky illumined by the fair auroral light of Science.

Did Bruno deserve to die? According to the notions of that age, he certainly did; though historians have, singularly enough, puzzled themselves in the search after an adequate motive for so severe a punishment. He had praised

heretical princes; he had reasoned philosophically on matters of faith—properly the subjects of theology; he had proclaimed liberty of thought, and investigation; he had disputed the infallibility of the Church in science; he had propagated such heresies as the rotation of the earth, and the infinity of worlds; he had refused to attend Mass; he had repeated many buffooneries then circulating, which threw contempt upon sacred things; finally, he had taught a system of Pantheism, which was altogether opposed to Christianity. He had done all this; and whoever knows the sixteenth century, will see that such an innovator had no chance of escape. Accordingly, the flames (as Scioppius sarcastically wrote in describing the execution to a friend) ‘carried him to those worlds which he imagined.’

‘As men die, so they walk among posterity,’ is the felicitous remark of Monckton Milnes; and Bruno, like many other men, is better remembered for his death than for anything he did while living. The flames which consumed his body have embalmed his name. He knew it would be so—‘La morte d’un secolo fa vivo in tutti gli altri.’

Considered as a system of philosophy, we cannot hesitate in saying that Bruno’s has only an historical, not an intrinsic value. Its condemnation is written in the fact of its neglect. But taken historically, his works are very curious, and still more so when we read them with a biographical interest; for they not only illustrate the epoch, but exhibit the man,—exhibit his impetuosity, recklessness, vanity, imagination, buffoonery, his thoroughly Neapolitan character, and his sincere love of truth. Those who wish to see grave subjects treated with dignity, will object to the licence he allows himself, and will have no tolerance for the bad taste he so often displays. But we should rather look upon these works as the rapid productions of a restless athlete—as the improvisations of a full, ardent, but irregular mind, in an age when taste was less fastidious than it has since become. If Bruno mingled buffooneries and obscenities with grave and weighty topics, he therein only follows the general licence of that age;

and we must extend to him the same forgiveness as to Bembo, Ariosto, Tansillo, and the rest. Plato himself is not wholly exempt from the same defect.

In adopting the form of dialogue, Bruno also followed the taste of his age. It is a form eminently suited to polemical subjects; and all his works were polemical. It enabled him to ridicule by turns the pedants, philosophers, and theologians; and to enunciate certain doctrines which even his temerity would have shrunk from, had he not been able to place them in the mouth of another. He makes his dialogues far more entertaining than works of metaphysics usually are; and this he does by digressions, by ridicule, by eloquence, and a liberal introduction of sonnets. Sometimes his very vivacity becomes wearisome. The reader is stunned and bewildered by the remorseless torrent of substantives and epithets which pours from his too prolific pen. There is nobody to rival him, but Rabelais, in this flux of words.* His great butts are the clergy, and the philosophers. He reproaches the former with ignorance, avarice, hypocrisy, and the desire to stifle inquiry and prolong the reign of ignorance. The philosophers he reproaches with blind adherence to authority, with stupid reverence for Aristotle and Ptolemy, and with slavish imitation of antiquity. It should be observed that he does not so much decry Aristotle, as the idolatry of Aristotle.† Against the pedantry of that pedantic age he is always hurling his thunders. ‘If,’ says he, in one place, characterizing the pedant, ‘he laughs, he calls himself Democritus; if he weeps, it is with Heraclitus; when he argues, he is Aristotle;

* To give the reader a taste of this quality, we will cite a sentence from the dedicatory epistle to *Gli Eroi Furori*: ‘Che spettacolo, o Dio buono! più vile e ignobile può presentarsi ad un occhio di terso sentimento, che un uomo cogitabundo, afflitto, tormentato, triste, maninconioso, per divenir or freddo, or caldo, or fervente, or tremante, or pallido, or rosso, or in mina di perplesso, or in atto di risoluto, un che spende il miglior intervallo di tempo destillando l’elixir del cervello con mettere scritto e sigillar in pubblici monumenti quelle continue torture, que’ gravi tormenti, que’ razionali discorsi, que’ fatuosi pensieri, e quelli amarissimi studi, destinati sotto la tirannide d’una indegna imbecille stolta e sozza sporcizia?’ Thus it continues for some fifty lines more!—*Opp. Ital.* ii. 299.

† Vide *Opp. Ital.* ii. 67, where this is explicitly stated.

when he combines chimeras, he is Plato; when he stutters, he is Demosthenes.' That Bruno's scorn sprang from no misology, his own varied erudition proves. But while he studied the ancients to extract from them such eternal truths as were buried amidst a mass of error, *they*, the pedants, only studied how to deck themselves in borrowed plumes.

Turning from manner to matter, we must assign to Bruno a place in the history of philosophy, as a successor of the Neo-Platonists, and the precursor of Spinoza, Descartes, Leibnitz, and Schelling. That Spinoza and Descartes were actually conversant with the writings of Giordano Bruno does not distinctly appear. Yet it is not to be disputed that Bruno anticipated Spinoza in his conception of the *immanence* of the Deity, in his famous *natura naturans* and *natura naturata*, and in his pantheistic theory of evolution. He also anticipated Descartes' famous criterium of truth, viz. that whatever is clear and evident to the mind, and does not admit of contradiction, must be true; and in his proclamation of Doubt as opposed to Authority, he thus insists upon Doubt as the starting-point: '*Chi vuol perfettamente giudicare deve saper spogliarsi de la consuetudine di credere, deve l'una e l'altra contraddittoria esistimare egualmente possibile, e dismettere a fatto quell'affezione di cui è imbibeto da natività.*'* Leibnitz was avowedly acquainted with Bruno's works, and derived therefrom his theory of monads. Schelling makes no secret of his obligations.

There is another merit in Bruno which should not be overlooked, that, namely, of giving a strong impulse to the study of Nature. Occupied with syllogisms about entities and quiddities, the philosophy of the Middle Ages had missed the great truth that 'man is the minister and interpreter of Nature.' Philosophy taught that the interpretation could proceed only from *within*; that men were to look into their own minds to analyse, subdivide, and classify their own ideas, instead of looking forth into Nature, and patiently

* *De l'Infinito Universo e Mondi: Opp. Ital.* ii. 84.

observing her processes.* Bruno was one of the first to call men out into the free air. With his poetical instinct he naturally looked on Nature as the great book for man to read. He deified Nature; and looked upon the Universe as the garment of God, as the incarnation of the divine activity. Let not this be misunderstood, however. If Bruno embraced the Copernican theory, and combated the general physics of his day, he is not on that account to be mistaken for a follower of scientific Method. He espoused the correct view of the earth's sphericity and rotation; but he did so on the faith of his metaphysical theories, not on rigorous induction.

Bruno's creed was Pantheism. In many passages he names and alludes to Avicbron, whose *Fons Vitæ* he had studied with great sympathy, and from whom he may have borrowed certain pantheistic ideas. He taught that God was the Infinite Intelligence, the Cause of causes, the Principle of all life and mind; the great Activity, whose action we name the Universe. But God did not *create* the universe; he *informed* it with life—with being. He *is* the universe; but only as the cause is the effect, sustaining it, *causing* it, but not limited by it. He is self-existing, yet so essentially active as incessantly to manifest himself as a Cause. Between the supreme Being and the inferior beings dependent upon him, there is this distinction: He is absolutely simple, without parts; he is one whole, identical and universal; whereas the others are mere individual parts, distinct from the great Whole. Above and beyond the visible universe there is an Infinite Invisible,—an immovable, unalterable Identity, which rules over all diversity. This Being of Beings, this Unity of Unities, is God: '*Deus est monadum monas, nempe entium entitas.*'

Bruno says, that although it is impossible to conceive Nature separated from God, we can conceive God separated from

* It is of them TELESIO energetically says: '*Sed veluti cum Deo de sapientiâ contententes decertantesque, mundi ipsius principia et causas ratione inquirere ausi, et quæ non invenerant, inventa ea sibi esse existimantes, volentesque, veluti suo arbitratu, mundum affluxere.*'—*De Rerum Naturâ*, in *Procem.*

Nature. The infinite Being is the essential centre and substance of the universe, but he is above the essence and substance of all things: he is *superessentialis, supersubstantialis*. Thus we cannot conceive a thought independent of a mind, but we can conceive a mind apart from any one thought. The universe is a thought of God's mind—nay more, it is the infinite activity of his mind. To suppose the world finite is to limit his power. 'Wherefore should we imagine that the Divine activity (*la divina efficacia*) is idle? Wherefore should we say that the Divine goodness, which can communicate itself *ad infinitum*, and infinitely diffuse itself, is willing to restrict itself? Why should his infinite capacity be frustrated—defrauded of its possibility to create infinite worlds? And why should we deface the excellence of the Divine image, which should rather reflect itself in an infinite mirror, as his nature is infinite and immense?''*

Bruno admits the existence of only one intelligence, and that is God.† *Est Deus in nobis*. This intelligence, which is perfect in God, is less perfect in inferior spirits; still less so in man; more and more imperfect in the lower gradations of created beings. But all these differences are differences of degree, not of kind. The inferior order of beings do not understand themselves, but they have a sort of language. In the superior orders of beings, intelligence arrives at the point of self-consciousness—they understand themselves, and those below them. Man, who occupies the middle position in the hierarchy of creation, is capable of contemplating every phasis of life. He sees God above him—he sees around him traces of the divine activity. These traces, which attest the immutable order of the universe, constitute the soul of the

* *De l' Infinito: Opp. Ital.* ii. 24.

† DE MORGAN (*Companion to the Almanack*, 1855) says: 'Among the versions of the cause of Bruno's death is *atheism*: but this word was very often used to denote rejection of revelation, not merely in the common course of dispute, but by such writers, for instance, as Brucker and Morhof. Thus Morhof says of the *De Monade*, &c., that it exhibits no manifest signs of atheism. What he means by the word is clear enough, when he thus speaks of a work which acknowledges God in hundreds of places, and rejects opinions as blasphemous in several.'

world. To collect them, and connect them with the Being whence they issue, is the noblest function of the human mind. Bruno further teaches that, in proportion as man labours in this direction, he discovers that these traces, spread abroad in nature, do not differ from the *ideas* which exist in his own mind.* He thus arrives at the perception of the identity between the soul of the world and his own soul, both as reflections of the Divine intelligence. He is thus led to perceive the identity of Subject and Object, of Thought and Being.

Such is the faint outline of a doctrine, to preach which Bruno became a homeless wanderer and a martyr; as he loftily says, 'Con questa filosofia l' anima mi s' aggrandisce, e mi si magnifica l' intelletto.'

In five dialogues, *La Cena de le Ceneri*, he combats the hypothesis of the world's immobility; proclaims the infinity of the universe, and warns us against seeking its centre or circumference. He enlarges on the difference between appearances and reality in celestial phenomena; argues that our globe is made of the same substance as the other planets, and that everything which *is*, is living, so that the world may be likened to a huge animal.† In this work he also answers his objectors, who bring against his system the authority of Scripture, exactly in the same way as modern geologists answer the same objection, viz. by declaring that the revelation in the Bible was a moral, not a physical revelation: it did not pretend to teach science, but, on the contrary, adopted ordinary notions, and expressed itself in the language

* 'ELP.: What is the purpose of the senses?—FIL.: Solely to excite the reason; to indicate the truth, but not to judge of it. Truth is in the sensible object as in a mirror; in the reason, as a matter of argument; in the intellect, as a principle and conclusion; but in the mind it has its true and proper form.'—*De l' Infinito*, p. 18.

† An idea borrowed from PLATO, who, in the *Timæus*, says, Οὕτως οὖν δὴ κατὰ λόγον τὸν εἰκότα δεῖ λέγειν τόνδε τὸν κόσμον ζῶον ἐμψυχον ἐννοῦν τε τῇ ἀληθείᾳ διὰ τὴν τοῦ θεοῦ γενέσθαι πρόνοιαν.—p. 26, ed. BEKKER. Compare also *Politicus*, p. 273. BRUNO may have taken this directly from PLATO, or he might have learned it from the work of his countryman, TELESIO, *De Rerum Naturâ*.

intelligible to the vulgar.* In this work there are some digressions more than usually interesting to us, because they refer to the social condition of England during Elizabeth's reign.

The two works, *De la Causa* and *De l' Infinito*, contain the most matured and connected exposition of his philosophical opinions. As our space will not admit of an analysis, we must refer to the one given by M. Bartholmess.† The *Spaccio de la Bestia Trionfante* is the most celebrated of all his writings. It was translated by Toland, in 1713, who printed only a very few copies, as if wishing it to fall into the hands of only a few choice readers. The very title has been a sad puzzle to the world, and has led to the strangest suppositions. The 'Triumphant Beast,' which Bruno undertakes to expel, is none other than this: ancient astronomy disfigured the heavens with animals as constellations, and under guise of expelling these, he attacks the great beast (Superstition) whose predominance causes men to believe that the stars influence human affairs. In his *Cabala del Cavallo Pegaseo*, he sarcastically calls the ass 'la bestia trionfante viva,' and indites a sonnet in praise of that respectable quadruped:

'Oh sant' asinità, sant' ignoranza,
Santa stoltizia, e pia divozione,
Qual sola puoi far l' anima sì buone
Ch' uman ingegno e studio non l' avanza!' &c.

The *Spaccio* is an attack upon the superstitions of the day,—a war against ignorance, and 'that orthodoxy without morality, and without belief, which is the ruin of all justice and virtue.' Bruno fancifully calls Morality 'the astronomy of the heart;' and did not Bacon call it 'the *Georgics* of the mind'? The *Spaccio* is a strange medley of learning, imagination, and buffoonery; and on the whole, perhaps the most tiresome of all his writings. M. Bartholmess, whose admiration for Bruno greatly exceeds my own, says of it:

* 'Secondo il senso volgare et ordinario modo di comprendere e parlare.' The whole of the early portion of Dialogue 4 (in which this distinction is maintained) is worth consulting.—*Opere*, i. 172 sq.

† BARTHOLMESS: *Jordano Bruno*, ii. 128-154.

'The mythology and symbolism of the ancients is there employed with as much tact as erudition. The fiction that the modern world is still governed by Jupiter and the court of Olympus, the mixture of reminiscences of chivalry, and the marvels of the middle ages, with the tales and traditions of antiquity—all those notions which have given birth to the philosophy of mythology, of religions, and of history—the Vicos and the Creuzers—this strange medley makes the *Spaccio* so interesting. The philosopher there speaks the noble language of a moralist. As each virtue in its turn appears to replace the vices which disfigure the heavens, it learns from Jupiter all it has to do, all it has to avoid: all its attributes are enumerated and explained, and mostly personified in the allegorical vein; all the dangers and excesses it is to avoid are characterised with the same vigour. Every page reveals a rare talent for psychological observation, a profound knowledge of the heart, and of contemporary society. The passions are subtly analysed and well painted. That which still more captivates the thoughtful reader is the sustained style of this long fiction, which may be regarded as a sort of philosophic sermon. Truth and wisdom, justice and candour, take the place in the future now occupied by error, folly, and falsehood of every species. In this last respect the *Spaccio* has sometimes the style of the Apocalypse.'

Without impugning the justice of this criticism, I must add, that the *Spaccio* taxes even a bookworm's patience, and ought to be read with a liberal licence in skipping.

Perhaps, of all his writings, *Gli Eroici Furori* is that which would most interest a modern reader, not curious about the philosophical speculations of the Neapolitan. Its prodigality of sonnets, and its mystic exaltation, carry us at once into the heart of that epoch of Italian culture when poetry and Plato were the great studies of earnest men. In it Bruno, avowing himself a disciple of Petrarch, proclaims a Donna more exalted than Laura, more adorable than all earthly beauty: that Donna is the imperishable image of Divine Perfection. It is unworthy of a man, he says, to languish

for a woman; to sacrifice to her all those energies and faculties of a great soul, which might be devoted to the pursuit of the Divine. Wisdom, which is truth and beauty in one, is the idol adored by the genuine hero. Love woman if you will, but remember that you are also a lover of the Infinite. Truth is the food of every heroic soul; hunting for Truth the only occupation worthy of a hero.* The reader of Plato will trace here a favourite image; and was it not Berkeley who described Truth as 'the cry of all, but the game few run down'?

* See, in particular, the fine passage, *Opp. Ital.* ii. 406-7.

FIRST EPOCH.

Philosophy again separates itself from Theology, and seeks the aid of Science.

CHAPTER I.

BACON AND DESCARTES.

IN the evolution of Philosophy, as in the evolution of an organism, it is impossible to fix with any precision a period of origin, because every beginning is also a termination, and resumes the results of a whole series of preceding evolutions. As Mr. Spedding felicitously says, our Philosophy 'was born about Bacon's time, and Bacon's name (as the brightest which presided at the time of its birth) has been inscribed upon it:

Hesperus that led
The starry host rode brightest.

Not that Hesperus did actually *lead* the other stars; he and they were moving under a common force, and they would have moved just as fast if he had been away; but because he shone brightest, he *looked* as if he led them.* Bacon and Descartes are generally recognised as the Fathers of Modern Philosophy, though they themselves were carried along by the rapidly-swelling current of their age, then decisively setting in the direction of Science. It is their glory to have seen visions of the coming greatness, to have expressed in terms of splendid power the thoughts which were dimly stirring the age, and to have sanctioned the new movement

* Bacon's Works, 1857, I. 374.

by their authoritative genius. The destruction of Scholasticism was complete. They came to direct the construction of a grander temple.

There are in these two thinkers certain marked features of resemblance, and others equally marked of difference. We see their differences most strikingly in their descendants. From Bacon lineally descended Hobbes, Locke, Diderot, D'Alembert, Condillac, Cabanis, and our Scotch School. From Descartes descended Spinoza, Malebranche, Leibnitz, Fichte, Schelling, and Hegel. The Inductive Method predominated in the one school, the Deductive in the other. These differences we shall recognise more fully later on: at present we may fix our minds on the two great points of resemblance: 1st, the decisive separation of Philosophy from Theology; 2nd, the promulgation of a new Method.

There have been discussions respecting Bacon's orthodoxy which I do not meddle with here, since, whether his occasional declarations were sincere, or were only the lip-homage which men in those days paid the Church, nothing is more certain than that he quietly excluded Theology from his scheme, telling the King why he did so. 'If I proceed to treat of it, I shall step out of the bark of human reason, and enter into the ship of the Church; which is only able by the Divine compass to rightly direct its course. Neither will the stars of philosophy which have hitherto so nobly shone upon us, any longer supply their light, so that on this subject it will be as well to keep silence.'* Again, 'Sacred Theology ought to be derived from the word and oracles of God, and not from the light of nature or the dictates of human reason.' And in the corresponding part of the *Advancement of Learning*, he says: 'The use of human reason in religion is of two sorts: the former in the conception and apprehension of the mysteries of God to us revealed; the other in the inferring and deriving of doctrine and direction thereupon. The former extendeth to the mysteries themselves, but how? by way of illustration, not by way of argument.'†

* *De Augmentis*, book ix. c. i.

† *Works*, iii. 479.

The spirit of his Philosophy was antagonistic to Theology, for it was a spirit of doubt and search; and its search was for visible and tangible results. Neither the ingenuities of logicians, nor the passionate earnestness of theologians, in that age of logicians and theologians, could lure him from his path. 'He lived in an age,' says Lord Macaulay, 'in which disputes on the most subtle points of divinity excited an intense interest throughout Europe, and nowhere more than in England. He was placed in the very thick of the conflict. He was in power at the time of the Synod of Dort, and must for months have been daily deafened with talk about election, reprobation, and final perseverance; yet we do not remember a line in his works from which it can be inferred that he was either a Calvinist or an Arminian. While the world was resounding with the noise of a disputatious theology and a disputatious philosophy, the Baconian School, like Allworthy seated between Thwackum and Square, preserved a calm neutrality, half scornful, half benevolent, and, content with adding to the sum of practical good, left the war of words to those who liked it.'

Descartes, though his constitutional timidity suppressed everything like overt hostility against the Church, was not less emphatically opposed to the theological spirit. He disengaged Philosophy from Theology by treating it as an independent topic, and by treating it on a Method which was in its essence destructive of all Theology, for it proceeded on a basis of absolute Doubt. The reign of Authority was proclaimed at an end. All the notions, all the hypotheses, all the beliefs which had filled the perplexed soul were to be ejected, and a new beginning was to be made from absolute doubt, nothing accepted till it was proved, nothing proved by authorities, but all by reasons. The clearance here was more than a clearance from scholastic argumentation and Aristotelian tradition, it was a sweeping away of all Authority whatever, succeeded by the installation of Reason as supreme arbiter. Nay, he went beyond Bacon in this respect, since he

wished to introduce Reason even into the domain of Theology: 'I have always thought,' he says in the dedication of his *Meditations* to the Sorbonne, 'that the two questions of the existence of God and the nature of the soul (two questions Bacon wisely left untouched) were the chief of those which ought to be demonstrated rather by philosophy than by theology; for although it is sufficient for us, the faithful, to believe in God and that the soul does not perish with the body, it certainly does not seem possible ever to persuade the infidels to any religion, nor hardly to any moral virtue, unless we first prove to them these two things by natural reason.'

While thus encroaching on the domain of Theology, he allowed no theological encroachments on Philosophy; and in promulgating his hypothesis of the vortices, he remarks that although we know for certain that God created the world at once, yet it would be of eminent interest to see how the world *might* have been evolved. Having protected himself by this *précaution oratoire*, he proceeds with his hypothesis, and explains the world wholly without reference to God. In like manner God is assumed as the first cause of motion, but his presence is never afterwards indicated.

The separation of Philosophy from Theology is made emphatic in the rejection of Final Causes by both Bacon and Descartes. The latter says, 'Nous rejetterons entièrement de notre philosophie la recherche des causes finales; car nous ne devons pas tant présumer de nous-mêmes que de croire que Dieu nous ait voulu faire part de ses conseils;' and again: 'Tout ce genre de causes qu'on a coutume de tirer de la fin n'est d'aucun usage dans les choses physiques et naturelles.' He left them for theologians, declaring that in Physics, where every conclusion must rest on solid grounds, the appeal to final causes is inept.

But perhaps the most effective of all the novelties was the effort of Descartes to explain the system of the world by Matter and Motion only, thus quietly setting aside all causes and metaphysical entities which had hitherto been invoked. The hypothesis of vortices was indeed soon disclosed to be

untenable; but the scientific attitude from which that hypothesis proceeded was never afterwards relinquished. It was a bold attempt at the application of the Objective Method, and was only defective in its restriction to Cosmology, and its exclusion of Biology, which was still left to the Subjective Method, as I shall presently notice.

The second point on which Bacon and Descartes resemble each other is in their conception of the results to be achieved by a totally new Method. Coming as they did on the top of the revolutionary wave which had washed away the old methods, seeing as they saw the striking results of physical research, and foreseeing yet more glorious conquests from the spirit which achieved those results, they yielded themselves to the pleasant illusion that a new Method would rapidly solve all problems. Bacon, as the more magnificent and imaginative mind, had grander visions, and more enthusiastic faith; but Descartes also firmly believed that the new Method was to do wonders. Indeed, it is interesting to note how these great intellects seem quite unconscious of their individual superiority, and are ready to suppose that their Method will equalise all intellects. It reminds us of Sydney Smith maintaining that any man might be witty if he tried. Descartes affirms that 'it is not so essential to have a fine understanding as to apply it rightly. Those who walk slowly make greater progress if they follow the right road than those who run swiftly on a wrong one.' To the same effect Bacon: 'A cripple on the right path will beat a racer on the wrong one.' This is true enough, but is beside the question. Equipped with good or bad instruments, the superiority of one worker over another is always made manifest; and it is precisely in the right use of a good Method that the scientific genius is called upon for its delicate and patient skill.

CHAPTER II.

BACON.

INTO the vexed questions of Bacon's conduct both with regard to Essex and with regard to bribery, I cannot enter here; but referring the curious to his biographers and critics, I will simply note that he was born in 1561; was educated at Trinity College, Cambridge, where he learned to distrust the Aristotelianism of his masters, and planned his own vast scheme of reform; went to Paris; sat in Parliament as member for Middlesex; was successively appointed of the Privy Council, and Lord Chancellor; was created Viscount Verulam; was impeached and condemned for corruption as a judge; and died in the spring of 1626. 'For my name and memory,' said the dying man, 'I leave it to men's charitable speeches, and to foreign nations, and the next age.'

Posterity has been generous; the fame of Bacon is immense. Admirers have not always been unanimous as to his special claims; but there has been no lack of enthusiasm, no questioning of his genius. He has been lauded for achievements in which he had no part, and has been adorned with titles to which he had doubtful pretensions; while his most important services have been overlooked. But the general recognition of his greatness, and our national pride in it, have not prevented certain attacks on his reputation, which have been answered in a rather angry spirit; and thus from one cause and another there is great difficulty in arriving at any candid and thorough appreciation of the work he did. It seems to some persons that Bacon did very little in rising against the philosophy of his day, and pointing out a new

path; and to others it seems that he did nothing of the kind. But whoever looks closely into the writings of Bacon's predecessors will see that what now seems obvious and trivial, was then startling and important. As M. Rémusat felicitously says, 'il fallait du génie pour avoir ce bon sens.'* And to those who deny that Bacon did head the revolution, I would oppose not simply the testimony of nearly three centuries, but the testimony of Gassendi, who, both as contemporary and a foreigner, was capable of judging the effect then produced.† It is indeed apparent to any one familiar with the writings of some of Bacon's immediate predecessors, especially Galileo, that there was little novelty in his denunciations of the erroneous Method then popular, or in his exhortations to pursue Observation, Experiment, and Induction. But it is not less apparent that he had wider and profounder views of the philosophy of Method than any of them, and that the popular opinion does not err in attributing to him the glory of heading the new era.

In England he is commonly regarded as the Father of Experimental Philosophy, and the originator of the Inductive Method. Men profess themselves followers of the 'Baconian Philosophy,' sometimes confounding that with a servile attention to facts and a most unscientific scorn of theories; at other times implying that by the Baconian Method is to be understood the one on which Science has successfully been pursued. A rigorous investigation of Bacon's claims will disclose the truth of his own statement that he was rather one who sounded the trumpet-call than one who marshalled the troops. He insisted on the importance of Experiment, but he could not teach what he did not himself understand—the Experimental Method. He exhorted men to study Nature; but he could not give available directions for that study. He had fervent faith in the possible conquests of Science; but never having thoroughly mastered any one

* RÉMUSAT: *Bacon, sa vie, son temps, sa philosophie et son influence*. Paris, 1857, p. 400.

† GASSENDI: *Opera*, 1658, i. 62.

science, he was incapable of appreciating the real conditions of research. He saw clearly enough the great truth that the progress of research must be gradual, but he did not see what were the necessary grades, he did not see the kind of inquiries, and the order they must follow, before discoveries could be made. That he had really but vague and imperfect conceptions of Scientific Method is decisively shown by his contemptuous rejection of Copernicus, Galileo, and Gilbert, and by his own plan of an investigation into Heat. One sentence alone would suffice to show this, namely, his sneer at Copernicus as 'a man who thinks nothing of introducing fictions of any kind into nature, provided his calculations turn out well.' Bacon did not understand, what Copernicus profoundly saw, that the only value of an hypothesis was its reconciliation of calculations with observations. In his plan for an *Inquisition into the Nature of Heat*, we see a total misconception of the scientific process: not only does he set about it in a laboriously erroneous way, but he seeks that which science proclaims inaccessible, the *nature* of heat. It is true that he arrives at an hypothesis which bears some resemblance to the hypothesis now accepted, namely, that heat is a mode of motion—'an expansive and restrained motion, modified in certain ways, and exerted in the smaller particles of the body.' But those who have been eager to credit him with an anticipation of modern views on the strength of this definition, have overlooked the fact that it is incapable of explaining a single process, includes none of the ascertained laws of phenomena, and is itself an example of the illicit generalization which Bacon elsewhere condemns.* It was with some justification, therefore, that Harvey, who knew what science was, and knew better than most men how discoveries were made, said of him that he wrote of science like a Lord Chancellor.

Indeed it is to mistake his position, and his greatness altogether, to attribute his influence on Philosophy, which is undeniable, to an influence on Science which is more than

* WHEWELL: *Philos. of Discovery*, p. 137.

questionable. Bacon was a philosopher; but because with him Philosophy, separating itself from the bondage of Theology, claimed to ally itself with Science, and sought its materials in the generalities of Science, those writers who have never made a very accurate distinction between the two, but have confounded Philosophy with Metaphysics, and Science with Physics, have naturally regarded Bacon as the precursor of Newton, Laplace, Faraday, and Liebig. It is in vain that critics oppose such a claim by asserting what is undeniable, that the great discoveries in modern science were neither made on Bacon's method,* nor under any direct guidance from him—that Copernicus, Galileo, and Kepler preceded him, that Harvey and Newton ignored him—staunch admirers have their answer ready: they know that Bacon was the herald of the new era, and they believe that it was his trumpet-call which animated the troops, and led them to victory.

Nor can any one pretend to estimate the influence of such a trumpet-call as Bacon's. He is one of the most striking illustrations of that Literature of Power, of which mention has already been made.† His distinguishing characteristic is a large opulence of mind, at once massive and florid, wide-sweeping and subtle; and the main source of his influence has been the dignity with which he invested the objective mode of looking at things, a mode liable to degenerate into a creeping prosaism and trivial love of detail, a mode wanting also in the attractions of a facile, though illusory, subjective tendency, but the only mode of reaching truth and consequently of securing the solid grandeur of permanent results. Under Bacon's eloquent teaching men began to see that they were working nobly, as well as working usefully, in limiting their researches to realities, foregoing the delusive hopes of metaphysics, proceeding

* 'That his method is impracticable,' says Mr. ELLIS, 'cannot, I think, be denied if we reflect not only that it never has produced any result, but also that the process by which scientific truths have been established cannot be so presented as even to appear to be in accordance with it.'—*Bacon's Works*, i. 38.

† See vol. i. p. 221.

cautiously, and checking the native impatience of the mind. Galileo, both by precept and example, had shown them a victorious method of research: but Galileo did not *dignify* that method in their eyes; he did not raise it into Philosophy. Bacon, weak in Science, was strong in the Philosophy which sought materials in Science.* There was, and still is, an instinctive antagonism between philosophers and savans: the philosophers complaining that Science is too narrow in its scope, the savans proclaiming that Philosophy is too vague in its principles. Bacon was the first to conceive a Philosophy of the Sciences. He did this when he proclaimed that Physics was 'the mother of all the sciences.' That this was greatly in advance of his age may be gathered from the fact of its to this day remaining a heresy: the notion of ethics and politics having the same methods, and being susceptible of the same treatment as physics, is by the majority looked upon as fanciful, if not absurd.

Speaking of the causes of errors in preceding philosophers, Bacon says, 'A second cause of very great moment is that through all those ages wherein men of genius and learning principally or even moderately flourished, the smallest part of human industry has been spent upon natural philosophy, though this ought to be esteemed as the great mother of the sciences; for all the rest, if torn from this root, may perhaps be polished and formed for use, but can receive little increase. . . .

'But let none expect any great promotion of the sciences, especially in their effective part, *unless natural philosophy be drawn out to particular sciences; and again, unless these particular sciences be brought back again to natural philosophy.* From this defect it is that astronomy, optics, music, many mechanical arts, and what seems stranger, *even moral and*

* HALLER well says: 'Bacon's Vergleichung mit Galiläi ist höchst ungerecht; der letztere war freilich ein besserer Mathematiker und Kenner der Sterne; aber er war auf wenige Wissenschaften eingeschränkt, und Bacon übersah sie alle wie ein Wesen von einem höheren Orden, und wie noch Niemand sie vor ihm angesehen hatte.' Cited by BÖHMER: *Ueber Francis Bacon von Verulam*. Erlangen: 1864, p. 22.

civil philosophy and logic, rise but little above their foundations, and only skim over the varieties and surfaces of things, viz. because after these particular sciences are formed and divided off, they are no longer nourished by natural philosophy, which might give them strength and increase; and therefore no wonder if the sciences thrive not, when separated from their roots.'*

By thus bringing Science out of its laboratories into the general field of thought, and by bringing Philosophy out of its Schools into the workshops of research, Bacon really introduced the new era. Dr. Whewell well says that 'a revolution was going on, as all the greatest physical investigators of the sixteenth century were fully aware. But their writings conveyed this conviction to the public at large very slowly. Men of letters, men of rank, men of the world did not become familiar with the abstruse works in which these views were published; and above all they did not by such occasional glimpses as they took of the state of physical science become aware of the magnitude and importance of this change. But Bacon's lofty eloquence, wide learning, comprehensive views, bold pictures of the coming state of things, were fitted to make men turn a far more general and earnest gaze upon the passing change. When a man of his acquirements, of his talents, of his rank and position, of his gravity and caution, poured forth the strongest and loftiest expressions and images which his mind could supply in order to depict the "great Instauration" which he announced; in order to contrast the weakness, the blindness, the ignorance, the wretchedness under which men had laboured while they followed the long beaten track, with the light, the power, the privileges which they were to find in the paths to which he pointed; it was impossible that readers of all classes should not have their attention arrested, their minds stirred, their hopes warmed, and should not listen with wonder and pleasure to the strains of prophetic eloquence in which so great a subject was presented.'†

* *Novum Organum*, i. Aph. 79, 80.

† WHEWELL: *Philos. of Discovery*, p. 127.

It was Bacon's constant endeavour, as it has been the cause of his enduring fame, to teach men the real object of research, and the scope of their faculties, and to furnish them with a proper Method whereon these faculties might be successfully employed. He thus not only stands clearly out in history as the exponent of the long-agitated antagonism to all the ancient and scholastic thinkers, but also as the exponent of the rapidly increasing tendency towards positive science. He is essentially modern. All his predecessors, even in their boldest attacks upon ancient philosophy, were themselves closely allied to the spirit of that which they opposed. But Bacon was modern in culture, in object, and in method. He attacked the ancient philosophy without having thoroughly understood it: he attacked it because he saw that a method which conducted great intelligences to such absurd conclusions as those then in vogue must necessarily be false.

'Whence can arise,' he asks, 'such vagueness and sterility in all the physical systems which have hitherto existed in the world? It is not certainly from anything in nature itself; for the steadiness and regularity of the laws by which it is governed clearly mark them out as objects of precise and certain knowledge.'

'Neither can it arise from any want of ability in those who have pursued such inquiries, many of whom have been men of the highest talent and genius of the ages in which they lived; and it can therefore arise from nothing else but the perverseness and insufficiency of the methods which have been pursued. Men have sought to make a world from their own conceptions, and to draw from their own minds all the materials which they employed; but if, instead of doing so, they had consulted experience and observation, they would have had facts, and not opinions, to reason about, and might have ultimately arrived at the knowledge of the laws which govern the material world.'

'As things are at present conducted, a sudden transition is made from sensible objects and particular facts to general propositions, which are accounted principles, and round

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which, as round so many fixed poles, disputation and argument continually revolve. From the propositions thus hastily assumed, all things are derived by a process compendious and precipitate, ill suited to discovery, but wonderfully accommodated to debate.

"middle terms."

'The way that promises success is the reverse of this. It requires that we should generalize slowly, going from particular things to those that are but one step more general; from those to others of still greater extent, and so on to such as are universal. By such means we may hope to arrive at principles, not vague and obscure, but luminous and well-defined, such as Nature herself will not refuse to acknowledge.'

Having thus indicated his position, it will be necessary to give a brief outline of the Method which he confidently believed was to be infallible and applicable in all inquiries. This was imperatively needed: 'for let a man look carefully into all that variety of books with which the arts and sciences abound, he will find everywhere endless repetitions of the same thing, varying in the method of treatment, but not new in substance, insomuch that the whole stock, numerous as it appears at first view, proves on examination to be but scanty. What was asserted once is asserted still, and what was a question once is a question still, and, instead of being resolved by discussion, is only fixed and fed.' He proposes his new Method, that thereby 'the intellect may be raised and exalted and made capable of overcoming the difficulties and obscurities of nature. The art which I introduce with this view (which I call the *Interpretation of Nature*) is a kind of logic, though the difference between it and the ordinary logic is great, indeed immense. For the ordinary logic professes to contrive and prepare helps and guards for the understanding as mine does; and in this one point they agree. But mine differs from it in three points: viz. in the end aimed at, in the order of demonstration, and in the starting point of inquiry. . . . But the greatest change I introduce is in the form itself of induction and the judgments made thereby.

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For the induction of which the logicians speak, which proceeds by simple enumeration, is a puerile thing; concludes at hazard, is always liable to be upset by a contradictory instance, takes into account only what is known and ordinary, and leads to no result. Now what the sciences stand in need of is a form of induction which shall analyse experience and take it to pieces, and by a due process of exclusion and rejection lead to an inevitable conclusion.' . . . 'Now my method, though hard to practise, is easy to explain; and it is this—I propose to establish progressive stages of certainty. The evidence of sense helped and guarded by a certain process of correction, I retain: but the mental operation which follows the act of sense I for the most part reject; and instead of it I open and lay out a new and certain path for the mind to proceed in, starting directly from the simple sensuous perception.'

Before expounding the rules which he proposes he enumerates the four sources of error, the *idols* as he terms them. He considered this enumeration as the more necessary, that the same idols were likely to return, even after the reformation of science.

These idols he divides into four classes, viz. :—

<i>Idola Tribus</i>	<i>Idols of the Tribe.</i>
<i>Idola Specūs</i>	<i>Idols of the Den.</i>
<i>Idola Fori</i>	<i>Idols of the Forum.</i>
<i>Idola Theatri</i>	<i>Idols of the Theatre.</i>

1. The *Idols of the Tribe* are the causes of error founded on human nature in general. 'The mind,' he observes, 'is not like a plane mirror, which reflects the images of things exactly as they are; it is like a mirror of an uneven surface, which combines its own figure with the figures of the objects it represents.'

Among the idols of this class we may reckon the propensity which there is in all men to find a greater degree of order, simplicity, and regularity than is actually indicated by observation. Thus as soon as men perceived the orbits of the planets to return into themselves, they supposed them to be perfect circles, and the motion in those circles to be

uniform; and to these hypotheses the astronomers and mathematicians of all antiquity laboured incessantly to reconcile their observations.

The propensity which Bacon has here characterised may be called the *spirit of system*.

2. The *Idols of the Den* are those which spring from the peculiar character of the individual. Besides the causes of error common to all mankind, each individual has his own dark cavern, or den, into which the light is imperfectly admitted, and in the obscurity of which a tutelary idol lurks, at whose shrine the truth is often sacrificed.

Some minds are best adapted to mark the differences of things, others to catch at the resemblances of things. Steady and profound understandings are disposed to attend carefully, to proceed slowly, and to examine the most minute differences; while those that are sublime and active are ready to lay hold of the slightest resemblances. Each of these easily runs into excess; the one by catching continually at distinctions, the other at affinities.

3. The *Idols of the Forum* are those which arise out of the intercourse of society, and those also which arise from language.

Men believe that their thoughts govern their words; but it also happens by a certain kind of reaction that their words frequently govern their thoughts. This is the more pernicious, that words, being generally the work of the multitude, divide things according to the lines most conspicuous to vulgar apprehensions. Hence, when words are examined, few instances are found in which, if at all abstract, they convey ideas tolerably precise and defined.

4. The *Idols of the Theatre* are the deceptions which have arisen from the dogmas of different schools.

As many systems as existed, so many representations of imaginary worlds had been brought upon the stage. Hence, the name of *Idola Theatri*. They do not enter the mind imperceptibly like the other three; a man must labour to acquire them, and they are often the result of great learning and study.

After these preliminary discussions Bacon proceeds, in the Second Book of his *Organum*, to describe and exemplify the nature of induction.

The first object must be to prepare a history of the phenomena to be explained, *in all their modifications and varieties*. This history is to comprehend not only all such facts as spontaneously offer themselves, but all *the experiments instituted for the sake of discovery*, or for any of the purposes of the useful arts. It ought to be composed with great care; the facts accurately related and distinctly arranged; their authenticity diligently examined; those that rest on doubtful evidence, though not rejected, yet noted as uncertain, with the grounds of the judgment so formed. This last is very necessary, for facts often appear incredible only because we are ill-informed, and cease to appear marvellous when our knowledge is further extended. This record of facts is *Natural History*.

The Natural History being prepared of any class of phenomena, the next object is to discover, by a comparison of the different facts, the *cause* of these phenomena, or, as Bacon calls it, the *form*. The form of any quality in a body is something convertible with that quality; that is, where it exists the quality exists: thus, if transparency in bodies be the thing inquired after, the *form* of it is something found wherever there is transparency. Thus form differs from cause in this only: we call it form or essence when the effect is a permanent quality; we call it cause when the effect is a change or an event.

Two other subjects, subordinate to *forms*, but often essential to the knowledge of them, are also occasionally subjects of investigation. These are the latent process, *latens processus*; and the latent schematism, *latens schematismus*. The former is the secret and invisible progress by which sensible changes are brought about, and seems in Bacon's acceptance to involve the principle since called the *law of continuity*, according to which no change however small can be effected but in *time*. To know the relation between the time and the change effected in it would be to have a perfect

knowledge of the latent process. In the firing of a cannon, for example, the succession of events during the short interval between the application of the match and the expulsion of the ball constitutes a latent process of a very remarkable and complicated nature, which however we can now trace with some degree of accuracy.

The latent schematism is that invisible structure of bodies on which so many of their properties depend. When we inquire into the constitution of crystals, or into the internal structure of plants, etc. we are examining into the latent schematism.

In order to inquire into the form of anything by induction, having brought together all the facts, we are to begin with considering what things are thereby *excluded* from the number of possible forms. This conclusion is the first part of the process of induction. Thus, if we are inquiring into the quality which is the cause of transparency in bodies; from the fact that the diamond is transparent, we immediately exclude rarity or porosity as well as fluidity from these causes, the diamond being a very solid and dense body.

Negative instances, or those where the *form* is wanting, to be also collected. That glass when pounded is not transparent is a negative fact when the form of transparency is inquired into; also that collections of vapours have not transparency. The facts thus collected, both negative and affirmative, should, for the sake of reference, be reduced to tables.

After a great many exclusions have been made, and left but few principles common to every case, one of these is to be assumed as the cause; and by reasoning from it synthetically we are to try if it will account for the phenomena. So necessary did this exclusive process appear to Bacon that he says, It may perhaps be competent to angels or superior intelligences to determine the form or essence directly, by affirmations from the first consideration of the subject; but it is certainly beyond the power of man, to whom it is only given to proceed at first by negatives, and in the last place to end in affirmatives, after the exclusion of everything else.

There is, however, great difference in the value of facts. Some of them show the thing sought for in the highest degree, some in the lowest, some exhibit it simple and uncombined, in others it appears confused with a variety of circumstances. Some facts are easily interpreted, others are very obscure, and are understood only in consequence of the light thrown on them by the former. This led Bacon to his consideration of *Prerogative Instances*, or the comparative value of facts as means of discovery. He enumerates twenty-seven different species; but we must content ourselves with giving only the most important.

I. *Instantiæ solitariae*: which are either examples of the same quality existing in two bodies otherwise different or of a quality differing in two bodies otherwise the same. In the first instance the bodies differ in all things but one. In the second they agree in all but one. Thus if the cause or *form* of colour be inquired into, *instantiæ solitariae* are found in crystals, prisms, drops of dew, which occasionally exhibit colour, and yet have nothing in common with the stones, flowers, and metals which possess colour permanently except the colour itself. Hence Bacon concludes that colour is nothing else than a modification of the rays of light produced in the first case by the different degrees of incidence; and second by the texture or constitution of the surface of bodies. He may be considered as very fortunate in fixing on these examples, for it was by means of them that Newton afterwards found out the composition of light.

II. The *instantiæ migrantes* exhibit some property of the body passing from one condition to another, either from less to greater or from greater to less; arriving nearer perfection in the first case, or verging towards extinction in the second.

Suppose the thing inquired into were the cause of whiteness in bodies: an *instantia migrans* is found in glass, which entire is colourless, but pulverised becomes white. The same is the case with water unbroken or dashed into foam.

III. The *instantiæ ostensivæ* are the facts which show

some particular property in its highest state of power and energy, when it is either freed from impediments which usually counteract it or is itself of such force as entirely to repress those impediments.

If the weight of air were inquired into, the Torricellian experiment, or the barometer, affords an *ostensive instance*, where the circumstance which conceals the weight of the atmosphere in common cases, namely the pressure of it in all directions, being entirely removed, that weight produces its full effect, and sustains the whole column of mercury in the tube.

IV. The *instances* called *analogous* or *parallel* consist of facts between which a resemblance or analogy is visible in some particulars, notwithstanding great diversity in all the rest. Such are the telescope and microscope compared to the eye. It was the experiment of the camera obscura which led to the discovery of the formation of images of external objects in the bottom of the eye by the action of the crystalline lens, and other humours of which the eye is formed.

V. *Instantiæ comitatús*: examples of certain qualities which always accompany one another. Such are flame and heat: flame being always accompanied by heat, and the same degree of heat in a given substance being always accompanied with flame.

Hostile instances, or those of perpetual separation, are the reverse of the former. Thus transparency and malleability in solids are never combined.

VI. The *instantia crucis*. When in any investigation the understanding is placed in *æquilibrio*, as it were, between two or more causes, each of which accounts equally well for the appearances as far as they are known, nothing remains to be done, but to look out for a fact which can be explained by one of these causes and not by the other. Such facts perform the office of a cross, erected at the separation of two roads, to direct the traveller which to take: hence called *crucial instances*.

The *experimentum crucis* is of such weight in matters of

induction that in all those branches of science where it cannot be resorted to (an experiment being out of our power and incapable of being varied at pleasure) there is often a great want of conclusive evidence.*

It is needless to criticise at any length a set of rules which the experience of two centuries has shown to be inapplicable; but we may point to numerous passages in his works which were not only valuable in his age but continue valuable in our own. Especially noticeable is the emphasis with which he insists on a graduated and successive induction, as opposed to the hasty leaping from single facts to wide generalisations, which continues and will ever continue to be a constant source of error, and belongs to our native infirmity. There is a slight defect in his formula, which is too vague. Had he said, 'graduated Verification of inductions,' we could have hit the precise mark; for a series of inductions may be gradual and successive, yet hypothetical and erroneous; it is the Verification of each step that alone can ensure certainty. And it is worth remarking in this connection that, having imperfectly grasped the principle of Verification, he was led to misconceive the value of facts, seeming to think that quantity was of more service than quality; which every investigator knows to be wholly wrong. Thus when he blames the philosophers for theorising on a few facts, and calls their 'illicit generalisations' an anticipation of nature, he is right enough in the particular case, but vague and even wrong in principle; since a few facts of one quality are worth hundreds of another quality, and the hypothesis which he calls rash may be true, although anticipating the tardy process of proof. All depends on the validity of the facts and verification of the hypothesis. One radical defect of the method lies in its being *inductive*, and not also *deductive*. He was so deeply impressed with a sense of the insufficiency of the Deductive Method alone, which he saw his contemporaries pursuing, and which he knew to be the cause of the failure of his predecessors, that he bestowed all his attention on the Inductive Method. His

* Abridged from PLAYFAIR'S *Dissertation*.

want of mathematical knowledge had also no small share in this error. Although however it may be justly said that he did not sufficiently exemplify the Deductive Method, it is not correct to say that he entirely neglected it. Those who assert this forget that the second part of the *Novum Organum* was never completed. In the second part it was his intention to treat of Deduction, as is plain from the following passage: 'The indications for the interpretation of Nature include two general parts. The first relates to the raising of Axioms from experience; and the second, to the deducing or deriving of new experiments from Axioms (de ducendis aut derivandis experimentis novis ab axiomatibus).'* We here see that he comprehended the twofold nature of the method; but inasmuch as he did not publish the second part of his *Organum*, we may admit the remark of Professor Playfair that 'in a very extensive department of physical science, it cannot be doubted that investigation has been carried on, not perhaps more easily, but with a less frequent appeal to experience, than the rules of the *Novum Organum* would seem to require. In all physical inquiries where mathematical reasoning has been employed, after a few principles have been established by experience, a vast multitude of truths, equally certain with the principles themselves, have been deduced from them by the mere application of geometry and algebra. . . . The strict method of Bacon is therefore only necessary where the thing to be explained is new, and where we have no knowledge, or next to none, of the powers employed.'†

His deficiency in mathematical knowledge caused him to overlook the equal importance of Deduction and Induction:— 'Bacon has judiciously remarked that the *axiomata media* of every science principally constitute its value. The lowest generalisations, until explained by and resolved into the middle principles, of which they are the consequences, have only the imperfect accuracy of empirical laws; while the most general laws are too general, and include too few circumstances

* *Novum Organum*, ii. Aph. 10.

† *Dissertation prefixed to the Encyclop. Britannica*, pp. 58, 61.

to give sufficient indication of what happens in individual cases, where the circumstances are almost always immensely numerous. In the importance therefore which Bacon assigns, in every science, to the middle principles, it is impossible not to agree with him. But I conceive him to have been radically wrong in his doctrine respecting the mode in which these *axiomata media* should be arrived at; although there is no one proposition in his works for which he has been so extravagantly eulogised. He enunciates, as a universal rule, that induction should proceed from the lowest to the middle principles, and from those to the highest, never reversing that order, and consequently leaving no room for the discovery of new principles by way of deduction at all. It is not to be conceived that a man of Bacon's sagacity could have fallen into this mistake, if there had existed in his time, among the sciences which treat of successive phenomena, one single deductive science, such as mechanics, astronomy, optics, acoustics, etc. now are. In those sciences, it is evident that the higher and middle principles are by no means derived from the lowest, but the reverse. In some of them, the very highest generalisations were those earliest ascertained with any scientific exactness; as, for example (in mechanics), the laws of motion. Those general laws had not indeed at first the acknowledged universality which they acquired after having been successfully employed to explain many classes of phenomena to which they were not originally seen to be applicable; as when the laws of motion were employed in conjunction with other laws to explain deductively the celestial phenomena. Still the fact remains that the propositions which were afterwards recognised as the most general truths of the science were, of all its accurate generalisations, those earliest arrived at.

'Bacon's greatest merit therefore cannot consist, as we are so often told that it did, in exploding the vicious method pursued by the ancients, of flying to the highest generalisations first, and deducing the middle principles from them, since this is neither a vicious nor an exploded method, but the

*the idea of
the middle
term:*

universally accredited method of modern science, and that to which it owes its greatest triumphs. The error of ancient speculation did not consist in making the largest generalisations first, but in making them without the aid or warrant of rigorous inductive methods, and applying them deductively without the needful use of that important part of the deductive method termed verification.*

We cannot entirely concur in the concluding paragraph. Although Bacon did not perhaps see the real importance of the Deductive Method, he did see the futility of the method as it was employed before his time; and he saw moreover that the cause lay in the want of 'verification'—in the want of 'the aid or warrant of rigorous inductive methods:' this we think his greatest merit, as we think his imperfect conception of the Deductive Method his greatest imperfection.

There is also another potent reason why the merely Inductive Method should not have contributed to any great discoveries; and we must borrow from the *System of Logic* the passage wherein this is exhibited:—

'It has excited the surprise of philosophers that the detailed system of inductive Logic has been turned to so little direct use by subsequent inquirers—having neither continued, except in a few of its generalities, to be recognised as a theory, nor having conducted, in practice, to any great scientific results. But this, though not unfrequently remarked, has scarcely received any plausible explanation; and some indeed have preferred to assert that all rules of induction are useless, rather than suppose that Bacon's rules are grounded upon an insufficient analysis of the inductive process. Such however will be seen to be the fact, as soon as it is considered that Bacon entirely overlooked plurality of causes. All his rules tacitly imply the assumption, so contrary to all we know of Nature, that a phenomenon cannot have more than one cause.'†

In another passage, too long for extract, the same author

* MILL: *System of Logic*, ii. 524-6.

† *Ibid.* ii. 373.

points out a capital error in Bacon's view of the inductive philosophy, viz. his supposition that the principle of elimination—that great logical instrument which he had the immense merit of first bringing into use—was applicable in the same sense, and in the same unqualified manner, to the investigation of *co-existences*, as to that of the *successions of phenomena*.*

In conclusion it may be said that, although his Method had not the power which he confidently assigned to it, his eloquence and far-reaching thoughts powerfully affected both his own and succeeding generations. He dignified the scientific attitude; he made men proud of investigations which otherwise they might have disdained; he kept before them the vanity of the Subjective Method, and passionately urged upon them the necessity of patient interrogation of Nature. The splendour of his style gave irresistible power to his ideas. 'Il se saisit tellement de l'imagination,' says M. Rémusat, 'qu'il force la raison à s'incliner, et il éblouit autant qu'il éclaire.'

* *System of Logic*, ii. 127 et seq.

CHAPTER III.

DESCARTES.

§ I. LIFE OF DESCARTES.

JUST at the close of the sixteenth century, 1596, there was born in Touraine, of Breton parents, a feeble sickly child, named René Descartes Duperron. A few days after his birth, a disease of the lungs carried off his mother. The sickly child grew to be a sickly boy; and, till the age of twenty, his life was despaired of.

That boy was one the world could ill afford to lose. Few who saw him creeping on the path, which his companions galloped along like young colts, would have supposed that the boy, whose short dry cough and paleness seemed to announce an early grave, was shortly to become one of the leaders of men, whose works would continue, through centuries, to be studied, quoted, and criticised. His masters loved him. He was a pupil of promise; and in his eighth year had gained the title of the Young Philosopher, from his avidity to learn, and his constant questioning.

His education was confided to the Jesuits. This astonishing body has many evils laid to its door, but no one can refuse to it the praise of having been ever ready to see and apply the value of education. In the college of La Flèche the young Descartes was instructed in mathematics, physics, logic, rhetoric, and the ancient languages. He was an apt pupil; learned quickly, and was never tired of learning.

Was the food supplied by the Jesuits nutritious? M.

Thomas remarks, 'There is an education for the ordinary man; for the man of genius there is no education but what he gives himself; the second generally consists in destroying the first.' And so it was with Descartes, who, on leaving La Flèche, declared that he had derived no other benefit from his studies than that of a conviction of his utter ignorance, and a profound contempt for the systems of philosophy in vogue. The incompetence of philosophers to solve the problems they occupied themselves with—the anarchy which reigned in the scientific world, where no two thinkers could agree upon fundamental points—the extravagance of the conclusions to which some accepted premisses led, determined him to seek no more to slake his thirst at their fountains.

'And that is why, as soon as my age permitted me to quit my preceptors,' he says, 'I entirely gave up the study of letters; and resolving to seek no other science than that which I could find in myself, or else in the great book of the world, I employed the remainder of my youth in travel, in seeing courts and camps, in frequenting people of diverse humours and conditions, in collecting various experiences, and above all in endeavouring to draw some profitable reflection from what I saw. For it seemed to me that I should meet with more truth in the reasonings which each man makes in his own affairs, and which, if wrong, would be speedily punished by failure, than in those reasonings which the philosopher makes in his study, upon speculations which produce no effect, and which are of no consequence to him, except perhaps that he will be more vain of them the more remote they are from common sense, because he would then have been forced to employ more ingenuity and subtlety to render them plausible.'*

For many years he led a roving unsettled life; now serving in the army, now making a tour; now studying mathematics in solitude, now conversing with scientific men. One constant

* *Discours de la Méthode*, p. 6, ed. JULES SIMON: Paris, 1844.

purpose gave unity to those various pursuits. He was elaborating his answers to the questions which perplexed him; he was preparing his Method.

When only three-and-twenty, he conceived the design of a reformation in philosophy. He was at that time residing in his winter quarters at Neuburg, on the Danube. His travels soon afterwards commenced, and at the age of thirty-three he retired into Holland, there in silence and solitude to arrange his thoughts into a consistent whole. He remained there eight years; and so completely did he shut himself from the world that he concealed from his friends the very place of his residence.

When the results of this meditative solitude were given to the world, in the shape of his celebrated *Discourse on Method*, and his *Meditations* (to which he invented replies), the sensation produced was immense. It was evident to all men that an original and powerful thinker had arisen; and although of course this originality could not but rouse much opposition, from the very fact of being original, yet Descartes gained the day. His name became European. His controversies were European quarrels. Charles I. of England invited him over, with the promise of a liberal appointment; and the invitation would probably have been accepted, had not the civil war broken out. He afterwards received a flattering invitation from Christina of Sweden, who had read some of his works with great satisfaction, and wished to learn from himself the principles of his philosophy. He accepted it, and arrived in Stockholm in 1649. His reception was most gratifying, and the Queen was so pleased with him as earnestly to beg him to remain with her, and give his assistance towards the establishment of an academy of sciences. But the delicate frame of Descartes was ill fitted for the severity of the climate, and a cold, caught in one of his morning visits to Christina, produced inflammation of the lungs, which carried him off. Christina wept for him, had him interred in the cemetery for foreigners, and placed a long eulogium upon his tomb. His remains were

subsequently (1666) carried from Sweden into France, and buried with great ceremony in St. Geneviève du Mont.

Descartes was a great thinker; but having said this, we have almost exhausted the praise we can bestow upon him as a man. In disposition he was timid to servility. When promulgating his proofs of the existence of the Deity, he was in evident alarm lest the Church should see something objectionable in them. He had also written an astronomical treatise; but hearing of the fate of Galileo, he refrained from publishing, and always used some chicane in speaking of the world's movement. He was not a brave man; nor was he an affectionate man. But he was even-tempered, placid, and studious not to give offence.

§ II. THE METHOD OF DESCARTES.

It has already been indicated that the great work performed by Descartes was, like that of Bacon, the promulgation of a new Method. This was rendered necessary by their separation from the ancient philosophy and their exclusion of Authority. If inquiry is to be independent—if Reason is to walk alone, in what direction must she walk? Having relinquished the aid of the Church, there were but two courses open: the one, to tread once more in the path of the ancients, and to endeavour by the ancient Methods to attain the truth; or else to open a new path, to invent a new Method. The former was barely possible. The spirit of the age was deeply imbued with a feeling of opposition against the ancient Methods; and Descartes himself had been painfully perplexed by the universal anarchy and uncertainty which prevailed. The second course was therefore chosen.

Uncertainty was the disease of the epoch. Scepticism was wide-spread, and even the most confident dogmatism could offer no criterion of certitude. This want of a criterion we saw leading, in Greece, to Scepticism, Epicureanism, Stoicism, the New Academy, and finally leading the

Alexandrians into the province of faith, to escape from the dilemma. The question of a criterion had long been the vital question of philosophy. Descartes could get no answer to it from the doctors of his day. Unable to find firm ground in any of the prevalent systems; distracted by doubts; mistrusting the conclusions of his own understanding; mistrusting the evidences of his senses, he determined to make a *tabula rasa*, and reconstruct his knowledge. He resolved to examine the premisses of every conclusion, and to believe nothing but upon the clearest evidence of reason; evidence so convincing that he could not by any effort refuse to assent to it.

He has given us the detailed history of his doubts. He has told us how he found that he could plausibly enough doubt of everything, except of his own existence. He pushed his scepticism to the verge of self-annihilation. There he stopped: there, in Self, in his Consciousness, he found at last an irresistible Fact, an irreversible Certainty.)

Firm ground was discovered. He could doubt the existence of the external world, and treat it as a phantasm; he could doubt the existence of God, and treat the belief as a superstition; but of the existence of his thinking, doubting, mind no sort of doubt was possible. He, the doubter, existed, if nothing else existed. The existence that was revealed in his own Consciousness was the primary Fact, the first indubitable certainty. Hence his famous *Cogito, ergo Sum*: I think, therefore I am.

It is somewhat curious, and, as an illustration of the frivolous verbal disputes of philosophers, not a little instructive, that this celebrated *Cogito, ergo Sum*, should have been frequently attacked for its logical imperfection. It has been objected, from Gassendi downwards, that to say, 'I think, therefore I am,' is a begging of the question, since existence has to be *proved* identical with thought. Certainly, if Descartes had intended to prove his own existence by reasoning, he would have been guilty of the *petitio principii* Gassendi attributes to him; viz. that the major premiss,

'that which thinks exists,' is assumed, not proved. But he did not intend this. What was his object? He has told us that it was to find a starting-point from which to reason—to find an irreversible certainty. And where did he find this? In his own Consciousness. Doubt as I may, I cannot doubt of my own existence, because my very doubt reveals to me a something which doubts. You may call this an assumption, if you will: I point out the fact as one above and beyond all logic; which logic can neither prove nor disprove; but which must always remain an irreversible certainty, and as such a fitting basis of philosophy.*

I exist. No doubt can darken such a truth; no sophism can confute this clear principle. This is a certainty, if there be none other. This is the basis of all science. It is in vain to ask for a proof of that which is self-evident and irresistible. I exist. The *consciousness* of my existence is to me the assurance of my existence.

Had Descartes done no more than point out this fact, he would have no claim to notice here; and we are surprised to find many writers looking upon this *Cogito, ergo Sum*, as constituting the great idea in his system. Surely it is only a statement of universal experience—an epigrammatic form given to the common-sense view of the matter. Any clown would have told him that the assurance of his existence was his consciousness of it; but the clown would not have stated it so well. He would have said: I know I exist, because I *feel* that I exist.

Descartes therefore made no discovery in pointing out this fact as an irresistible certainty. The part it plays in his system is only that of a starting-point. It makes *Consciousness* the basis of all truth. There is none other possible. Interrogate Consciousness, and its clear replies will be Science. Here we have a new basis and a new philosophy introduced. It was indeed but another shape of the old formula, 'Know thyself,' so differently interpreted by Thales,

* See his replies to the third and fifth series of Objections, affixed to his *Meditations*.

Socrates, and the Alexandrians: but it gave that formula a precise signification, a thing it had before always wanted. Of little use could it be to tell man to know himself. How is he to know himself? By looking inwards? We all do that. By examining the nature of his thoughts? That had been done without success. By examining the *process* of his thoughts? That too had been accomplished, and the logic of Aristotle was the result.

The formula needed a precise interpretation; and that interpretation Descartes gave. Consciousness, said he, is the basis of all knowledge; it is the only ground of absolute certainty. Whatever it distinctly proclaims must be true. The process, then, is simple: examine your Consciousness, and its clear replies. Hence the vital portion of his system lies in this axiom, *all clear ideas are true*: whatever is clearly and distinctly conceived is true. This axiom he calls the foundation of all science, the rule and measure of truth.*

The next step to be taken was to determine the rules for the proper detection of these ideas; and these rules he has laid down as follows:—

I. Never to accept anything as true but what is *evidently* so; to admit nothing but what so clearly and distinctly presents itself as true that there can be no reason to doubt it. ✓

II. To divide every question into as many separate questions as possible; that each part being more easily conceived, the whole may be more intelligible.—(Analysis.) ✓

III. To conduct the examination with order, beginning by that of objects the most simple, and therefore the easiest to be known, and ascending little by little up to knowledge of the most complex.—(Synthesis.) ✓

IV. To make such exact calculations, and such circumspections, as to be confident that nothing essential has been omitted. ✓

* 'Hæc igitur detectâ veritate simul etiam invenit omnium scientiarum fundamentum: ac etiam omnium aliarum veritatum mensuram ac regulam; scilicet, quicquid tam clarè ac distinctè percipitur quàm istud verum est.—*Princip. Phil.* p. 4.

Consciousness being the ground of all certainty, everything of which you are clearly and distinctly conscious must be true; everything which you clearly and distinctly conceive exists, if the idea of it involves existence.

In the four rules, and in this view of Consciousness, we have only half of Descartes' system: the psychological half. It was owing, we believe, to the exclusive consideration of this half that Dugald Stewart was led (in controverting Condorcet's assertion that Descartes had done more than either Galileo or Bacon towards experimental philosophy) to say that Condorcet would have been nearer the truth if he had pointed him out as the Father of the Experimental Philosophy of the Mind. Perhaps the title is just; but Condorcet's praise, though exaggerated, was not without good foundation.

There is, in truth, another half of Descartes' system; equally important, or nearly so: we mean the Deductive Method. His eminence as a mathematician is universally recognised. He was the first to make the grand discovery of the application of Algebra to Geometry; and he made this at the age of twenty-three. The discovery that geometrical curves might be expressed by algebraical numbers, though highly important in the history of mathematics, only interests us here by leading us to trace his philosophical development. He was deeply engrossed in mathematics; he saw that mathematics were capable of a still further simplification, and of a far more extended application. Struck as he was with the certitude of mathematical reasoning, he began applying the principles of mathematical reasoning to the subject of metaphysics. His great object was, amidst the scepticism and anarchy of his contemporaries, to found a system which should be solid and convincing. He first wished to find a basis of certitude—a starting-point: this he found in Consciousness. He next wished to find a method of certitude: this he found in mathematics.

'Those long chains of reasoning,' he tells us, 'all simple and easy, which geometers use to arrive at their most difficult

demonstrations, suggested to me that all things which came within human knowledge must follow each other in a similar chain; and that provided we abstain from admitting anything as true which is not so, and that we always preserve in them the order necessary to deduce one from the other, there can be none so remote to which we cannot finally attain, nor so obscure but that we may discover them.* From these glimpses of the twofold nature of Descartes' Method, it will be easy to see into his whole system: Consciousness being the only ground of certitude, mathematics the only method of certitude.

We may say therefore that the Deductive Method was now completely constituted. The whole operation of philosophy henceforth consisted in deducing consequences. The premisses had been found; the conclusions alone were wanting. This was held to be true of physics no less than of psychology. Thus, in his *Principia*, he announces his intention of giving a short account of the principal phenomena of the world, not that he may use them as reasons to prove anything; for he adds, 'we desire to deduce effects from causes, not causes from effects: but only in order that out of the innumerable effects which we learn to be capable of resulting from the same causes, we may determine our minds to consider some rather than others.†

Such being the Method of Descartes, our readers will hear with surprise that some French writers have declared it to be the same Method as that laid down by Bacon; and this surprise will be heightened on learning that M. Victor Cousin is one of those writers. He says, 'Let us now see what our Descartes has done. He has established in France the same Method that England has endeavoured to attribute exclusively to Bacon; and he has established it with less grandeur of imagination in style, but with the superior

* *Discours de la Méthode*, p. 12.

† *Principia Philos.* pars iii. p. 51. The phrase, 'cupimus enim rationes effectuum à causis, non autem à contrario causarum ab effectibus deducere,' may be said to express the nature of his method, as opposed to the method of Bacon.

precision which must always characterise one who, not content with laying down rules, puts them himself in practice, and gives the example with the precept.* M. Cousin then quotes the four rules we have already given; and seeing in them Analysis and Synthesis, which he believes solely to constitute the Method of Bacon, declares that the two Methods are one. Such a statement requires no refutation; nor indeed would it have been noticed, did it not afford an illustration of the loose way in which the term Method is employed by many writers.

"
Bacon +
Descartes.

And here may be resumed and closed the parallel previously commenced between Bacon and Descartes, assigning to each his distinctive position. Both may be said to have instituted the Objective Method, though both in varying degrees failed to complete that attempt by an extension to all matters of inquiry, embracing both man and the world. The aberration is especially noticeable in Descartes, who, having subordinated all cosmical speculations to the Objective Method, having promulgated an hypothesis which was to explain the phenomena of the world on the properties recognised in matter without the intervention of occult qualities, entities, or volitions, and having even extended this principle to the chief physical aspects of the organism, broke suddenly away when he arrived at mental and social problems, and reintroduced the Subjective Method, which indeed he proclaimed (though he was untrue to his announcement) to be the Method of all philosophic research. His aberration is all the more striking because he had boldly asserted the automatism of animals. He denied that they had moral and mental faculties: they were, he said, machines. This hypothesis has been variously interpreted. It is too repugnant to common sense to gain general acceptance, and being so repugnant, it has puzzled the ingenuity of critics to explain how Descartes came to adopt it. I am not prepared with a satisfactory explanation, but note that this effort to reduce

* *Hist. de la Phil.* leçon iii. p. 91, ed. Bruxelles, 1840.

animal phenomena to a mechanism is only an extension of the effort to reduce cosmical phenomena to a mechanism, and that the denial of a soul to brutes is a rigorous consequence of the Method employed by him.*

Thus on the one hand his antagonism to the Scholastic Philosophy, aided by his scientific knowledge, led him to the objective point of view in studying Cosmology, while on the other hand his psychological inquiries reintroduced the subjective point of view, and thus not only thwarted the perfect conception of Method but led, as it always leads, to great imperfection in the application of particular methods. (A perfect employment of Method includes both the Induction of Bacon and the Deduction of Descartes, with some subsidiary processes which neither of them understood, especially the use of Hypothesis and Experiment.) If it was Bacon's error to undervalue Deduction, it was no less the error of Descartes to undervalue Induction, owing to the influence of the Subjective Method, which naturally leads to the mistake of overlooking the essential requisite of Verification. The Subjective Method is always deductive, and its deductions are logically formed on the same process as those of the Objective Method; but there is a philosophical difference between the two: the *data* of the first are not verified inductions, nor are the conclusions verified by confrontation with reality; the *data* and conclusion of the second are rigorously verified.

N.B.
N.B.

* 'Quels qu'aient été les graves inconvénients réels de cette singulière théorie automatique, il importe de noter que c'est précisément pour la réfuter que les physiologistes, et surtout les naturalistes du siècle dernier, furent graduellement conduits à détruire directement la vaine séparation fondamentale que Descartes avait ainsi tenté d'établir entre l'étude de l'homme et celle des animaux.'—COMTE: *Cours de Philos. Positive*, iii. 763. 'Le fameux partage opéré par Descartes n'a pu avoir d'autre efficacité essentielle que de procurer à la méthode positive la liberté nécessaire à sa formation graduelle, jusqu'à ce que sa constitution fût devenue assez complète pour lui permettre de s'emparer enfin du seul sujet qui lui eût d'abord été interdit.'—*Ibid.* p. 771. It should be added that, however absurd this hypothesis may have seemed, it was speedily reproduced by the majority even of those who made merry with it, nor is it yet finally extinct; for what is the popular notion of animals impelled by Instinct to actions which in man are the results of Reason, but a vague form of the notion that animals are mere machines without intelligent direction?

Although Bacon failed to recognise the importance of Deduction yet he did recognise the necessity of the objective point of view, and sought the laws of phenomena in the order of the phenomena themselves. He sought an alliance with scientific research, and did his best to institute its methods. He was fully alive to the illusions of the Subjective Method. Not so Descartes. His basis was subjective. He attempted a systematic arrangement of the external phenomena according to deductions from unverified data. So far from looking out of himself for the explanation of external phenomena, it was his constant aim to discover in the orderly arrangement of ideas a key to the mystery of the world. This, indeed, Leibnitz proclaims as his chief merit.* Although, therefore, Descartes sought alliance with scientific research, his Philosophy was essentially metaphysical; and although he made discoveries in Science, his fame is that of a great metaphysician.

While Bacon urged the necessity of proceeding from effects to causes, Descartes proceeded from causes to effects. Bacon erred as to the *nature* of the causes we should seek, as to the operation of a multiplicity of causes, and as to the methods of search. Descartes erred still more gravely in starting from data that were logical figments or subjective inspirations. Both separated Philosophy from Theology, and thus consummated the long struggle which accompanied the birth-pangs of modern culture: but Bacon, true to the objective point of view, declared the problems of Theology and Ontology to be inaccessible to reason, consequently beyond the province of Philosophy; Descartes, true to the subjective point of view, declared them to be soluble *only* by reason, and made it the primary object of Philosophy to solve them.

It is therefore with justice that modern Science looks up to Bacon as its illustrious herald, and modern Metaphysics

* 'On ne peut nier que Descartes n'ait apporté de belles choses; surtout il a le mérite, renouvelant l'entreprise de Platon, de détourner les esprits des considérations sensibles.'—LEIBNITZ: *Sur une Réforme de la Philos. Première.*

sees its ancestry in the schools which issued directly from Descartes. The metaphysical character of the Cartesian philosophy is well expressed by Fontenelle in his parallel between Descartes and Newton: 'Tous deux, géomètres excellents, ont vu la nécessité de transporter la géométrie dans la physique. . . . Mais l'un, prenant un vol hardi, a voulu se placer à la source de tout, se rendre maître des premiers principes par quelques idées claires et fondamentales, pour n'avoir plus qu'à descendre aux phénomènes de la nature comme à des conséquences nécessaires; l'autre, plus timide ou plus modeste, a commencé sa marche par s'appuyer sur les phénomènes pour remonter aux principes inconnus, résolu de les admettre, quels que les pût donner l'enchaînement des conséquences. L'un part de ce qu'il entend nettement pour trouver la cause de ce qu'il voit; l'autre part de ce qu'il voit pour en trouver la cause, soit claire, soit obscure.'

§ III. APPLICATION OF THE METHOD.

The first application of Descartes' Method was not, as some say, to prove his own existence (for that neither admitted of *logical* proof nor of disproof: it was a primary fact); but to prove the existence of God.

Interrogating his Consciousness, he found that he had the idea of God, understanding, by God, a substance infinite, eternal, immutable, independent, omniscient, omnipotent. This, to him, was as certain a truth as the truth of his own existence. I exist: not only do I exist, but exist as a miserably imperfect finite being, subject to change—greatly ignorant, and incapable of creating anything. In this, my Consciousness, I find by my finitude that I am not the All; by my imperfection, that I am not perfect. Yet an infinite and perfect being must exist, because infinity and perfection are implied, as correlatives, in my *ideas* of imperfection and finitude. God therefore exists: his existence is clearly proclaimed in my Consciousness, and can no more be a matter of doubt, when fairly considered, than my own

existence. The conception of an infinite being proves his real existence; for if there is not really such a being, *I* must have made the conception; but if I could make it, I can also unmake it, which evidently is not true; therefore there must be, externally to myself, an archetype from which the conception was derived.

'The ambiguity in this case,' it has been remarked,* 'is the pronoun *I*, by which in one place is to be understood my *will*, in another *the laws of my nature*. If the conception, existing as it does in my mind, had no original without, the conclusion would unquestionably follow that *I* had made it—that is, the laws of my nature must have spontaneously evolved it; but that my *will* made it would not follow. Now, when Descartes afterwards adds that I cannot unmake the conception, he means that I cannot get rid of it by an act of my will, which is true, but is not the proposition required. That what some of the laws of my nature have produced, other laws, or the same laws in other circumstances, might not subsequently efface, he would have found it difficult to establish.'

His second demonstration is the weakest of the three. Indeed, it is the only one not irrefragable, upon his principles. The third demonstration is peculiarly Cartesian, and may be thrown into this syllogism:—

All that we clearly and distinctly conceive as contained in anything is true of that thing.

Now we conceive, clearly and distinctly, that the existence of God is contained in the idea we have of him.

Ergo,

God exists.

Having demonstrated the existence of God, he had to prove the distinction between body and soul. This, to him was easy. The fundamental attribute of Substance must be extension, because we can abstract from Substance all the qualities except extension. The fundamental attribute of

* MILL: *System of Logic*, ii. 447.

Mind is thought, because by this attribute Mind is revealed to itself. Now, according to one of his logical axioms, two substances are really distinct when their ideas are complete, and in no way imply each other. The ideas, therefore, of extension and thought being distinct, it follows that Substance and Mind are distinct in essence.

We need not pursue our analysis of his metaphysical notions further. We only stop to remark on the *nature* of his demonstrations of God and the soul. It is, and was, usual to prove the existence of God from what is called the 'evidence of design.' Descartes neither started from design nor from motion, which must have a mover: he started from the *à priori* ideas of perfection and infinity; his proof was in the clearness of his idea of God. His method was that of definition and deduction. To define the idea of God, and hence to construct the world—not to contemplate the world, and thence infer the existence of God—was the route he pursued. Is it not eminently the procedure of a mathematician? and of a mathematician who has taken Consciousness as his starting-point?

Descartes' speculations are beautiful exemplifications of his Method; and he follows that Method, even when it leads him to the wildest conclusions. His physical speculations are sometimes admirable (he made important discoveries in optics), but mostly fanciful. The famous theory of vortices deserves a mention here, as an example of his Method.

He begins by banishing the notion of a *vacuum*, not, as his contemporaries said, because Nature has a horror of vacuum, but because, the essence of Substance being extension, wherever there is extension there is Substance, consequently empty space is a chimera. The substance which fills all space must be assumed as divided into equal angular parts. Why must this be assumed?—Because it is the most simple, therefore the most natural, supposition. This substance being set in motion, the parts are ground into a spherical form; and the corners thus rubbed off, like filings or sawdust, form a second and more subtle kind of substance. There is,

besides, a kind of substance, coarser and less fitted for motion. The first kind makes luminous bodies, such as the sun and fixed stars; the second makes the transparent substance of the skies; the third kind is the material of opaque bodies, such as earth, planets, etc. We may also assume that the motions of these parts take the form of revolving circular currents, or *vortices*. By this means the matter will be collected to the centre of each vortex, while the second or subtle matter surrounds it, and by its centrifugal effort constitutes light. The planets are carried round the sun by the motion of this vortex, each planet being at such a distance from the sun as to be in a part of the vortex suitable to its solidity and mobility. The motions are prevented from being exactly circular and regular by various causes. For instance, a vortex may be pressed into an oval shape by contiguous vortices.*

Descartes, in his Physics, adopted a method which permitted him to set aside the *qualities* and the *substantial forms* (which others were seeking), and to consider only the relations of number, figure, and motion. In a word, he saw in Physics only mathematical problems. This was premature. Science, in its infancy, cannot be carried on by the Deductive Method alone: such a process is reserved for its maturity. The reason is that the Deduction is only valid when it is employed on the Objective Method.

But Deduction is a potent instrument, and Bacon's greatest error was in not sufficiently acknowledging it. Hence we may partly account for the curious fact that Bacon, with his Induction, made no discoveries, while Descartes, with his Deduction, made important discoveries. Of course the greater physical knowledge of Descartes, and the greater attention bestowed by him upon physics, had much to do with this, by giving him an objective basis: but his Method also assisted him, precisely because his discoveries were of

* We have followed Dr. WHEWELL's exposition of this theory, as given by him, *Hist. of Ind. Sciences*, ii. p. 134. The reader will do well, however, to turn also to DESCARTES' own exposition in the *Principia Philosophiæ*, where it is illustrated by diagrams.

a kind to which the mathematical reasoning was strictly applicable.

That Descartes had read Bacon there is no doubt. He has himself praised Bacon's works as leaving nothing to be desired on the subject of *experience*; but he perceived Bacon's deficiency, and declared that we are 'liable to collect many *superfluous* experiences of particulars, and not only superfluous but false,' if we have not ascertained the truth *before* we make these experiences. In other words, experiment should be the verification of an *a priori* conception; whereas Bacon teaches us to form our conceptions from experiment.

We have said enough to make the Method of Descartes appreciable. His position is that of founder of the Deductive Method on the basis of Consciousness. His scholars may be divided into the mathematical cultivators of Physics and the deductive cultivators of Philosophy. By the first he was speedily surpassed, and his influence on them can only be regarded as an impulsion. By the second he was *continued*: his principles were unhesitatingly accepted, and only developed in a somewhat different manner.

His philosophical Method subsists in the present day. It is the Method implicitly or explicitly adopted by most metaphysicians in their speculations upon ontological subjects. Is it a good Method? The question is of the highest importance: we will endeavour to answer it.

§ IV. IS THE METHOD TRUE?

In the Dedicatory Epistle prefixed to his *Meditations*, Descartes declares that his demonstrations of the existence of God, etc. 'equal, or even surpass, in certitude the demonstrations of geometry.' Upon what does he found this belief? He founds it upon the very nature of certitude. Consciousness is the basis of all certitude. Whatever I am distinctly conscious of, I must be certain of; all the ideas which I find in my Consciousness, as distinctly conceived, must be true. The belief I have in my existence is derived

from the fact of my Consciousness: I *think*, therefore I *exist*. Now as soon as I conceive a truth with distinctness, I am irresistibly led to believe in it; and if that belief is so firm that I can never have any reason to doubt that which I believe, I have all the certitude that can be desired.

Further: we have *no knowledge whatever of anything external to us except through the medium of ideas*. The consequence is, says Descartes, that *whatever we find in the ideas must necessarily be in the external things*.

It is only in our minds that we can seek whether things exist, or not. There cannot be more reality in an effect than in a cause. The external thing, being the cause of the idea, must therefore possess as much reality as the idea, and *vice versa*. So that whatever we conceive as existent exists.

This is the basis on which Descartes' system is erected; if this basis be rotten, the superstructure must fall. If the root is vitiated, the tree will bear no fruit. No thinker, except Spinoza, has so clearly, so frankly, stated his criterion.

And the criterion is fallacious. The very Consciousness to which he appeals convicts him. There is this fallacy in his system: Consciousness is the ultimate ground of certitude, *for me*; if I am conscious that I exist, I cannot doubt that I exist; if I am conscious of pain, I must be in pain. This is self-evident. But what ground of certitude can my Consciousness afford respecting things which are *not me*? How does the principle of certitude apply? How far does it extend? It can only extend to things which relate to me. I am conscious of all that passes within myself; but I am not conscious of what passes in not-self: all that I can possibly know of the not-self is in its effects upon me.

Consciousness is therefore 'cabin'd, cribb'd, confined' to *me*, and to what passes within *me*; so far does the principle of certitude extend, and no farther. Any other ideas we may have, any knowledge we may have respecting *not-self*, can only be founded on inferences. Thus, I burn myself in the fire: I am conscious of the sensation; I have certain and immediate knowledge of that. But I can only be certain

that a change has taken place in my consciousness; when from that change I infer the existence of an external object (the fire), my inference *may* be correct, but I have obviously shifted my ground; Consciousness—my principle of certitude—forsakes me here: I go out of myself to infer the existence of something which is not-self. My knowledge of the sensation was *immediate*, indubitable. My knowledge of the object is *mediate*, uncertain.

Directly therefore we leave the ground of Consciousness for that of inference, avenues of doubt are opened. Other inferences can be brought to bear upon any one inference to illustrate or to refute it. The mathematical certainty which Descartes attributed to these inferences becomes a great uncertainty. He says we only know things through the medium of ideas. We accept the proposition as unquestionable. But then he also says that, in consequence of this, whatever we find in the ideas must necessarily be true of the things. The reason is, that as ideas are caused in us by objects, and as every effect must have as much reality as the cause—the effect being *equal* to the cause—so must ideas have the same reality as things. But this is a double fallacy. In the first place, an effect is not *equal* to its cause; it is a mere consequent of an antecedent, having no such relation as *equality* whatever. In the second place, the use of the term 'reality' is ambiguous. Unquestionably an effect really exists; but reality of existence does not imply similarity of modes of existence. The burn occasioned by a fire is as *real* as the fire; but it in no way *resembles* the fire.

So when Descartes says that what is true of ideas must be true of things, he assumes that the mind is a passive recipient—a mirror, in which things reflect themselves. This is altogether fallacious; the mind is an *active* co-operator in all perception—perception is a consciousness of changes operated in ourselves, not a consciousness of the objects causing those changes. In truth, so far from our being able to apprehend the nature of things external to us, there is an impenetrable screen for ever placed before our eyes, and that impenetrable

screen is the very Consciousness upon which Descartes relies. When placed in contact with external objects, they operate upon us; their operations we know, themselves we cannot know; precisely because our knowledge of them is *mediate*, and the medium is our Consciousness. Into whatever regions we wander, we carry with us this Consciousness, by means of which, indeed, we know, but all we know is—*ourselves*.

Knowledge is composed of Ideas. Ideas are the joint product of mind on the one hand and of external causes on the other; or rather we may say that Ideas are the internal movements excited by external causes. Upon what principles of inference (since we are here on the ground of inference) can you infer that the ideas excited are *copies* of the exciting causes—that the ideas excited apprehend the whole nature of the causes? The cause of the fallacy is in that very strong disposition to give objectivity to a law of the mind; in consequence of which we often hear people declare that something they are asserting is ‘involved in the idea.’

An exposition of the fallacy which misled Descartes is given by Mr. Mansel in the following admirable passage: ‘*Clearness and distinctness* were proposed by Descartes as criteria of the truth of ideas; but that philosopher has nowhere accurately distinguished between thought properly so called and other states of consciousness, nor between the *formal* clearness and distinctness which depend on the relation of one thought to another and the *material* clearness and distinctness which depend on the relation of a thought to its object as presented. A concept is formally clear when it can be distinguished as a whole from any other; it is formally distinct when its several constituent elements can be analysed and distinguished from each other; but this is a criterion of logical reality alone, of the mental conceivability, not of the extra-mental existence of the object. If I have a clear and distinct notion of gold and of a mountain, I have also a clear and distinct notion of a golden mountain, though the objects of the two first notions are real, and of the last imaginary. On the other hand, a concept will be materially

clear and distinct if it accurately expresses the character of the object itself, and its component elements as they actually exist in nature. These qualities can obviously exist only in those notions which represent real objects; and in this case the clearness and distinctness can only be ascertained by an exact comparison of the object with its notion, i.e. by experience.’*

It is true that Descartes was more or less aware of the equivocal nature of his canon, since he adds to the requisite of clearness the proviso that the idea shall involve existence, which would be tantamount to Mr. Mansel’s phrase ‘material clearness.’ But he gives no test whereby this material clearness may be ascertained; and in his speculations the material element is frequently disregarded. The experience, which he may be supposed to have silently understood in reference to some objects, could not have been implied in others. How can experience verify the material clearness of our formal idea of God? of the soul? of cause?

There is, indeed, but one mode of escape for Descartes, and all those who believe in the validity of ontological speculations: namely, to assert the existence of Innate Ideas, or—as the theory is generally stated in modern times—of Necessary Truths independent of all experience. If the idea of God, for example, be innate in us, it is no longer a matter of inference, but of Consciousness; and on such an hypothesis Descartes is correct in believing that the certainty of this idea equals the certainty of geometry.

But some maintain that he did not assert the existence of Innate Ideas, though, from its having been a doctrine maintained by his followers, it is usually attributed to him. Dugald Stewart quotes the following passage from Descartes in reply to his adversaries, who accused him of holding the tenet of Innate Ideas:—‘When I said that the idea of God is innate in us, I never meant more than this, that *Nature has endowed us with a faculty by which we may know God*; but I have never either said or thought that such ideas had

* MANSEL: *The Limits of Demonstrative Science*, 1853, p. 10.

an actual existence, or even that they were a *species* distinct from the faculty of thinking. . . . Although the idea of God is so imprinted on our minds that every person has within himself the faculty of knowing Him, it does not follow that there may not have been various individuals who have passed through life without making this idea a distinct object of apprehension; and, in truth, they who think they have an idea of a plurality of Gods have no idea of God whatever.'

From this it would appear that he did not hold the doctrine of Innate Ideas. But we must venture to dissent from the conclusion drawn by Dugald Stewart on the strength of such a passage; against that passage we will bring another equally explicit (we could bring fifty, if necessary), which asserts the existence of Innate Ideas. 'By the word *idea*,' he says, 'I understand all that can be in our thoughts; and I distinguish three sorts of ideas:—*adventitious*, like the common idea of the sun; *framed* by the mind, such as that which astronomical reasoning gives of the sun; and *innate*, as the idea of God, mind, body, a triangle, and generally all those which represent true immutable and eternal essences.'* This last explanation is distinct; and it is all that the serious antagonists of Innate Ideas have ever combated. If Descartes, when pressed by objections, gave different explanations, we may attribute that to the want of a steady conception of the vital importance of Innate Ideas in his system. The fact remains that Innate Ideas form the necessary groundwork of the Cartesian doctrine.

Although the theory of Innate Ideas may, in its Cartesian form, be said to be exploded, it does really continue to be upheld, under a new form. A conviction of the paramount necessity of some such groundwork for metaphysical speculation has led to the modern theory of *Necessary Truths*. This plausible theory has been adopted by Dr. Whewell in his *Philosophy of the Inductive Sciences*; but his arguments have

* *Lettres de Descartes*, liv.

been completely answered by Mr. Mill on the one hand, and by Sir John Herschel on the other.*

The basis of all modern ontological speculations lies in the assumption that we have *ideas independent of experience*. Experience can only tell us of ourselves, or of phenomena; of noumena it can tell us nothing. That we have no ideas independent of experience has been clearly enough established in the best schools of psychology; but the existence of metaphysical speculation proves that the contrary opinion still finds numerous upholders.

The fundamental question then of modern Philosophy was this, Have we any Ideas independent of Experience? And the attempts to solve it will occupy the greater portion of our history. Before entering upon it, we must exhibit the Method of Descartes pushed to its ultimate conclusions in Spinoza.†

* *System of Logic*, book ii. ch. v.; and *Quarterly Review*, June 1841; indeed, Dr. WHEWELL's arguments had been anticipated and refuted by LOCKE long before. See *Essay*, book iv. ch. 6, 7.

† The best modern works on Descartes, apart from regular Histories of Philosophy, are FRANCISQUE BOULLIER: *Histoire et Critique de la Révolution Cartésienne*, Paris, 1842; CH. RENOUVIER: *Manuel de la Philos. Moderne*, Paris, 1841; FEUERBACH: *Geschichte der neuern Philosophie*, Leipzig, 1847, and KUNO FISCHER: *Gesch. der neuern Philos.* Bd. i. Heidelberg, 1865. The best edition of Descartes' works is that by VICTOR COUSIN, in eleven vols. 8vo. Paris, 1826. M. JULES SIMON has also published a cheap and convenient edition, in one volume, of the *Discourse on Method*, the *Meditations*, and the *Treatise on the Passions*, Paris, 1844. Both of these have been translated into English (Edinburgh, 1853).

SECOND EPOCH.

*The Subjective Method carried to its extreme results in
Pantheistic Idealism.*

CHAPTER I.

SPINOZA.

§ I. HIS LIFE.

GREAT among the greatest as a thinker, Spinoza is also one of the most interesting figures in the history of Philosophy—a standing lesson of the injustice of mankind to those who are honest in their opinions when the opinions happen to be unpopular. All men declare it ignoble to pretend to believe that which the mind rejects as false; yet the many are ever ready to make the rejection a crime. You ought not to be a hypocrite; but you ought not to disbelieve what we assure you is the truth. Be honest by all means; only don't think differently from us. If you do, we must suspect your morals. It has always been known that Spinoza was as gentle in his life as he was steadfast in his philosophy; that he lived modest, virtuous, and independent, without blame among men, except for his incorrigible distrust in the wisdom of his elders. It has been known that if he had been an orthodox Jew, or an orthodox Christian, his career would have been held up as a model, and his character canonised; but this knowledge for several generations did not arrest almost universal execration, did not prevent his name becoming a brand of infamy; so that the accusation of Spinozism was another

name for atheism, and deliberate yielding of the soul to Satan.

But the temper of opinion has changed. The detested atheist is now commonly spoken of as if he were a saint; the 'devil's ambassador' is listened to as if he were a prophet. Men vie with each other in exaggeration of his merits. It is now acknowledged that he was good, wise, gentle, generous; and only polemical intolerance, or the uneasy vanity which seeks display in paradox, will now deny him these qualities. We owe the change to Lessing and Mendelssohn, whose sincerity and penetration at once discerned in the execrated writings a massive grandeur and a lucid depth, and in the man a moral elevation and serenity, which claimed all honour. Herder, Goethe, Novalis, Schleiermacher, Schelling, Hegel—each had his emphatic protest to utter against the vulgar outcry. France followed: and it would now be deemed as great a mark of ignorance to speak with reprobation of Spinoza as to shudder at the heresy of Galileo. The man whom the pious Malebranche could designate 'a wretch' (*un misérable*), the pious Schleiermacher invoked as a saint;* the man whom the sceptic Bayle called a 'systematic atheist,' the Catholic Novalis named 'a God-intoxicated man.' And yet, although the temper has changed, we may doubt whether Spinoza will not continue to be misunderstood by the majority: 'Les âmes mâles,' says Rousseau, 'ont un idiome dont les âmes faibles n'ont pas la grammaire.'

Let us, from the story of his life and the study of his teaching, try to form some opinion of the justice of the hatred he inspired, and of the veneration now felt for him. When scorn for what is base and false is not imperatively commanded by the evidence, admiration becomes a duty. Admiration, provided it be sincere, and not a spurious noisy enthusiasm, partly echo, partly sham, is so noble a feeling, so healthy in its influence on the mind whose guest it

* MALEBRANCHE: *Méditations Chrétiennes*, ix. 13. SCHLEIERMACHER: *Rede über die Religion*, p. 47.

becomes, that even for our own sakes we ought to give it hospitality, while on the highest grounds of justice it carries its own credentials. Blind admiration, indeed, is of no benefit; neither is blind scorn. Spinoza needs but to be known to be admired. Hence it was that his affectionate biographer, Jean Colerus, pastor at the Hague, though trembling with a vague horror at the consequences of what Spinoza taught, was so fascinated by the beauty of the life, that he devoted himself to the collection of materials which should be a lasting monument to the goodness and purity of the heretic. Nothing is more certain than that the life was one of blameless purity. Had there been any rumours to the contrary, the hatred of offended Jews and Christians would have surely preserved and magnified them. This negative evidence is stronger even than the positive details. To be famous, to be infamous, and yet give Scandal no morsel for malignant curiosity, is the rare lot of only the rarest natures.

Baruch Despinosa, or Benedictus de Spinoza,* was born on the 24th November, 1632, in a house on a Burgwal of Amsterdam, behind the Synagogue.† His parents were descendants of Portuguese Jews who had sought refuge in Holland from the merciless Inquisition. His father was an honourable but not wealthy merchant. There were two daughters and one son. This is pretty much all we know of the family. Of Benedict himself as a child we know nothing. Early banished from the home and hearts of his relatives, there were none of those pleasant little traditions concerning the boy which are handed about with pride when the man becomes illustrious.

* In the Royal Library at Hanover there is a letter from SPINOZA to LEIBNITZ in which he signs himself B. Despinosa. But when he published his Abridgment of Descartes, he wrote his name Spinoza; and this is the spelling adopted in the Excommunication. Such minor variations were little thought of in early days, and even at the present day in France we sometimes see a similar indifference.

† I tried in vain to discover the house. The Dutch, who have suffered the house where the orthodox ERASMUS was born, to become a low gin-shop, are not the people to have been very curious about the birthplace of the heterodox SPINOZA.

The first authentic glimpse we get of him is that he was destined for a theological career. His rabbinical education gave him such opportunities for the display of precocious power that he soon attracted the attention of the great Talmudist, Saul Levi Morteira, who felt in him the interest a teacher feels in a promising pupil. Unhappily for teachers, promising pupils often become troublesome: the very ardour of study and vigour of intellect which carry them beyond their schoolfellows carry them also, and with increased momentum, past those boundaries which Authority has fixed. Thus eagerness becomes dangerous, earnestness heresy, and the hopeful pupil passes into the condition of a hopeless outcast. Young Benedict asked such intelligent questions, listened so appreciatingly to the replies, showed so nimble an understanding, and so much eagerness for light, that we can sympathise with Morteira's bewilderment, half dread, half pride, when the pupil hurried on with logical impetuosity, asking questions inconvenient to answer, and pointing out slight discrepancies in the answers. He was indeed a promising pupil; but of a promise that looked threatening. At fourteen he was a match for a rabbi in the extent and accuracy of biblical learning. At fifteen he puzzled the Synagogue with questions to which satisfactory answers were not forthcoming. Morteira, alarmed, endeavoured to check this inquiring spirit. The attempt was futile. How long the period of disquiet lasted is unknown. Spinoza had made enemies by his freedom; and since he would not hold his tongue, he had to listen to threats mingled with sophistications. Naturally, heterodoxy grew with discussion. At last he felt that he could no longer remain a member of the Synagogue. We can easily imagine the wrath excited by his withdrawal, not only among the rabbis, but among the members of his family circle. We can picture the storming father, weeping and reproachful mother, indignant sisters, one after another and all together, threatening, sneering, expostulating, urging irrelevant arguments: Why should he not believe what his forefathers had believed? What vanity

in him to pretend to a wisdom greater than that of the wisest rabbis? What would become of him? What could be his chance of success in life? And the feelings of his family—were they to be disregarded? It was dreadful to think of; wicked, selfish; certain to come to no good.

The arguments of Morteira having failed, we need not ask what chance there was in the 'wild and whirling words' of a family (with its 'feelings' unaccountably disregarded) making any change in his position. Threats were tried and failed. Then a bribe was tried: the suasive influence of money would surely succeed where logic failed? A pension was proposed to him of one thousand florins annually, on the condition of his appearing from time to time in the synagogue, and keeping within his own bosom certain troublesome doubts. The 'bad example' and the 'scandal' would thus be avoided. Nothing was asked of him more than is asked by all Churches, when they are not strong enough to punish, and are weak enough to wish for homage where there is no belief. 'If you are not with us do at least pretend to be with us; give us your countenance, if not your heart.' To some sensitive consciences this is an appalling request. It is like an echo of the tempter's voice. Spinoza had one of these sensitive consciences. He not only would not pretend to believe what he did not believe; he was hurt at the supposition that he could be bribed into hypocrisy.

We can understand how the rage of the rabbis was intensified by this refusal, without, however, believing that they instigated the attempt at assassination which followed. I, for my part, distinctly refuse to believe that. I have never seen any evidence of Jews being morally inferior to Christians; and although fanatics of all sects have shown themselves remarkably indifferent to shedding the blood of opponents, they need, for the sake of their consciences, some form to legalise or legitimise the murder they decree. They cannot look into each other's faces, and propose what each knows will be a murder.

Même aux yeux de l'injuste un injuste est horrible.*

* BOILEAU.

The action of public bodies must be public, and must be protected by at least the forms of legality or the sophisms of 'a higher law.* On these general grounds, therefore, I acquit the rabbis of having instigated the attempt. Far more probable is the supposition that some fanatic, hearing of the scandal about to fall upon his church, should have conceived that he would do the church a service if he arrested the scandal with his knife.

Be that as it may, one evening, on returning from the theatre (according to one account), or from the synagogue (according to another), or, as Mr. Froude suggests, probably coming to his home, which was behind the synagogue, a man rushed on him, and struck at him with a knife. The blow, slanting downwards, only tore his coat and grazed his skin. The fanatic escaped. The torn coat was preserved by Spinoza as a memento of religious amenity.

Shortly after this exhibition of individual fanaticism there was another and more imposing exhibition of corporate indignation in the solemn process of Excommunication. There was a large and agitated crowd in the synagogue when the tabernacle wherein were deposited the Books of the Law was opened; and the light of numerous candles of black wax streamed upon the long beards and beaded eyes of the angry faithful. Morteira, formerly the proud teacher, now the irritated priest, ordered sentence of execution to be passed. The chanter rose and chanted forth in loud lugubrious accents the words of execration and of banishment. The words ran thus:—

'According to what has been decreed in the Council of Angels, and definitely determined in the Assembly of Saints, we reject, and banish, and declare him to be cursed and excommunicated, agreeable to the will of God and the Congregation, by virtue of the Book of the Law, and of the six

* SPINOZA has expressed this in the following passage: 'Ita enim hominum naturam constitutam videmus, ut unusquisque (sive rex sive subditus sit) si quid turpe commisit factum suum talibus circumstantiis adornare studeat ut nihil contra justum et decorum commisisse credatur.'—*Tractatus Theolog.-Politicus*, c. xii.

hundred and thirteen Precepts contained therein. We pronounce the same interdiction used by Joshua with respect to the city of Jericho; the same curse wherewith Elisha cursed those wanton and insolent children, as well as his servant Gehasi; the same Anathema used by Barak with respect to Meros; the same Excommunication used anciently by the members of the Great Council; and which Jehuda, the son of Ezekiel, did likewise thunder against his servant, and with all the curses, anathemas, interdictions, and excommunications which have been fulminated from the time of Moses, our master, to this present day, in the name of *Achthariel*, who is also called *Jah*, the Lord of Hosts; in the name of the great prince *Michael*; in the name of *Metateron*, whose name is like that of his master;* in the name of *Sandalphon*, whose ordinary employment consists in presenting flowers and garlands to his master [that is, in offering the prayers of the children of Israel before the throne of God]. Lastly, in that name which contains forty-two letters—namely, in the name of Him who appeared to Moses in the bush; in that name by which Moses opened and divided the waters of the Red Sea; in the name of Him who said, *I am that I am and who shall be*; by the mysterious depths of the great Name; by His Holy Commandments engraved upon the two Tables of the Law. Lastly, in the name of the Lord of Hosts the Tetragrammaton, the God of Israel who sits enthroned upon the cherubim. In the name of the Globes, Wheels, mysterious Beasts, and his ministering Angels. In the name of all the Holy Angels who minister before the Most High. Every son of Israel or daughter of Israel who shall trespass one of the ordinances denounced solemnly. Let him be cursed by the Lord God of Hosts, who sits above the cherubim, whose holy and dreadful name was pronounced by the high-priest in the great day of atonement. Let him be cursed in heaven and earth by the very mouth of the Almighty God. Let him be cursed in the name of the

† The letters of the word *Metateron* make up the same number with the word *Schadai*, the Almighty, namely, three hundred and fourteen.

great prince *Michael*, in the name of *Metateron*, whose name is like that of his Master. Let him be cursed in the name of *Achthariel Jah*, the Lord of Hosts, cursed by the mouth of the Seraphim and Ofanim and those ministering angels who minister in the presence of God to serve him in all purity and holiness.

‘Was he born in *Nisan* (March), a month the direction of which is assigned to *Uriel*, and to the angels of his company, let him be cursed by the mouth of *Uriel*, and by the mouth of the angels whereof he is the head.

‘Was he born in *Ijar* (April), a month the direction of which is assigned to *Zephaniel*, and to the angels of his company, let him be cursed by the mouth of *Zephaniel*, and by the mouth of the angels whereof he is the head.

‘Was he born in *Sivan* (May), a month the direction of which belongs to *Amriel*, let him be cursed, &c.

‘Was he born in *Thammus* (June), the direction of which is assigned to *Peniel*, let him be cursed, &c.

‘Was he born in *Ab* (July), the direction of which is assigned to *Barkiel*, let him be cursed, &c.

‘Was he born in *Elul* (August), the direction of which is assigned to *Periel*, let him be cursed, &c.

‘Was he born in *Tishri* (September), the direction of which is assigned to *Zuriel*, let him be cursed, &c.

‘Was he born in *Marcheschvan* (October), the direction of which is assigned to *Zachariel*, let him be cursed, &c.

‘Was he born in *Kishlev* (November), the direction of which is assigned to *Adoniel*, let him be cursed, &c.

‘Was he born in *Tefet* (December), the direction of which is assigned to *Anael*, let him be cursed, &c.

‘Was he born in *Schevat* (January), the direction of which is assigned to *Gabriel*, let him be cursed, &c.

‘Was he born in *Adar* (February), the direction of which is assigned to *Rumiel*, and to those of his company, let him be cursed by the mouth of *Rumiel*, and by the mouth of the angels of whom he is the head.

‘Let him be cursed by the mouth of the Seven Angels who preside over the seven days of the week, and by the

mouth of all the angels who follow them and fight under their banners. Let him be cursed by the Four Angels who preside over the four seasons of the year, and by the mouth of all the angels who follow them and fight under their banners. Let him be cursed by the mouth of the seven principalities. Let him be cursed by the mouth of the princes of the Law, whose name is Crown and Seal. Let him be cursed by the mouth of the strong, powerful, and dreadful God.

'We beseech the great God to confound such a man, and to hasten the day of his destruction. O God, the God of Spirits, depress him under all flesh, extirpate, destroy, exterminate, and annihilate him. The ire of the Lord, the most contagious storms and winds fall upon the head of impious men; the exterminating angels will fall upon them. Cursed be he wherever he turn; his soul shall go out from him in terror. His death be in dire sickness; his spirit shall not pass out and away. God send the sharpest and most violent evils upon him. Let him perish by a burning fever, by a consumption, being dried up by fire within and covered with leprosy and imposthumes without. Let God pursue him till he be entirely rooted out and destroyed; until his own sword shall be pierced through his own breast; and his bow shall be broken. He will be like the straw which is scattered about by the wind. The angel of the Lord will pursue him in darkness, in slippery places, where the paths of the wicked are. His destruction will fall upon him at the time when he does not expect it; he will find himself taken in the snare which he laid in private for others. Being driven from the face of the earth, he will be driven from light into darkness. Oppression and anguish will seize him on every side. His eyes shall see his condemnation. He will drink the cup of the indignation of the Almighty God, whose curses will cover him at his garments. The strength of his skin shall be devoured. The earth will swallow him up. God will extirpate and shut him for ever out of his house. Let God never forgive him his sins. Let the wrath and indignation of the Lord surround him and smoke for ever on his head. Let

all the curses contained in the Book of the Law fall upon him. Let God blot him from under the heavens. Let God separate him to his own destruction from all the tribes of Israel, and give him for his lot all the curses contained in the Book of the Law.

'As for you who are still living, serve the Lord your God, who blessed Abraham, Isaac, Jacob, Moses, Aaron, David, Solomon, the prophets of Israel, and so many good men everywhere dispersed among the Gentiles. May it please the great God to shower his blessings upon this whole assembly, and upon all other holy assemblies, and the members thereof, except those that trespass over this Anathema. God keep them under his holy protection. God preserve them in his great mercy, and deliver them from all sorts of misery and oppression. God grant them all a great many years; let him bless and prosper all their undertakings. Lastly, may the great God shortly grant them that Deliverance which they with all the brethren of Israel expect: and be this His gracious Will. *Amen.*'*

While these curses were chanted forth from one side, the thrilling sounds of a trumpet accompanied them at intervals from the other. The black candles were reversed, and made to melt drop by drop into a huge tub filled with blood. This symbol made the spectators shudder, and when the close came, and the lights were all suddenly immersed in the blood, a cry of execration rose from all, and in that darkness rose shouts of 'Amen!' to the curses.

* The formula of excommunication, contained in a Ritual called 'Kol Bo' (reprinted in UGOLINI, tom. xxvii.), but probably never used in full, I have found nowhere in English but in the little work called *An Account of the Life and Writings of Spinoza*, published in London, 1720, which none of the latter writers seem to have known. It contains an abbreviation of the Life by COLERUS, and a slight analysis of the *Tractatus Theologico-Politicus*. It has only ninety-six pages of large print, and was published for one shilling. The translation is loose in many places, and the Hebrew names incorrectly spelled. The version I have printed has been revised for me by the erudite Semitic scholar Mr. E. Deutsch. The form of excommunication printed by VLOTEN in the *Supplementum* is only an abridgment of that quoted in the text; whether this abridgment were made in the paper sent to Spinoza, or whether it were made by the chief Rabbi at the ceremony, is not clear.

Amsterdam, at least the Jewish part of it, was in an uproar; but the young man who had been cursed thus particularly was perhaps not much troubled. Black candles melting in blood, lugubrious chantings of detailed curses, with trumpet accompaniments, might terrify those who believed that God would certainly fulfil all the intentions which Rabbis attributed to him—believed in the wrath and ferocity, the merciless lust of vengeance, which they, personifying their own passions, attributed to the Creator; but such cursings were no more than fetid breath to one whose conceptions of the Creator were of a higher kind, whose faith in the goodness of God, and placid resignation to God's will, was more than a tradition, more than a profession, a deep conviction working through his life.

So much of the outward life we know; of the inward life we know nothing. Kuno Fischer is probably warranted in the assumption that it was to the influence of Descartes that Spinoza owed his emancipation from rabbinical ideas; but we have no evidence on the subject. Nor do we know how he fared when banished from the Jewish community and his family. His isolation was great. Excluded from the society of Jews, he found no refuge in that of Christians; nor had he at first a select circle of sympathising friends to whom he could turn: these came later on. There were, indeed, one or two from whom he might have received sympathy: one of these was Vanden Ende, the physician and philologist, from whom he had learned Latin and (it is conjectured) philosophy, and (as I conjecture) gained that acquaintance with anatomy and physiology which, although never obtruded, is nevertheless discernible in his writings.* Vanden Ende had a daughter who is sometimes said to have taught Spinoza Latin, but as she was only a child of twelve at the date of the Excommunication, 1656, inexorable chronology refuses

* There are many slight indications scattered through his works, but the best evidence is that he never commits himself by ignorant statements in these matters.

its countenance to that myth. Whether there is any truth in the story of Spinoza's having been jilted by this Clara Maria for one Kerckrinck, a Hamburgh merchant, who wooed and won her with pearl necklaces (a story which has been elevated into romance by Auerbach), it would be difficult to decide. He himself spoke of the affection he had borne her; but considering that she refused to marry Kerckrinck until he had come over to her religion, we cannot suppose that she would have listened to Spinoza, who had discarded all religious forms. And what shall we say to the suggestion of his Jewish biographer, Philippson, that it was this idea of a Jew marrying a Christian which led him to meditate on Judaism, Christianity, and Religion in the abstract, whence he rose through Love to Philosophy?

Love seems to have played but a very subordinate part in this thinker's life. He tells us himself that it was another mistress to whom he was devoted. In a fragment entitled 'On the Improvement of the Intellect,' which was his first work, there is this passage, which has biographical significance:—

'Experience having taught me that all the ordinary affairs of life are vain and futile, and that those things which I dreaded were only in themselves good or bad according as they moved my soul, I finally resolved on inquiring if there was anything truly good in itself, and capable of being communicated to man, a good which, everything else being rejected, could fill the soul entirely; whether, in short, that good existed which, if possessed, could give supreme and eternal happiness. I say, *I finally resolved*, because at first it seemed inconsiderate to renounce the good which was certain for a greater good which was uncertain. I pondered on the advantages which accrued from reputation and wealth, all of which I must renounce if I would seriously undertake the search after another object, and which, if happiness chanced to belong to these advantages, I should necessarily see escape me; and if, on the other hand, happiness belongs to other objects, and I sought happiness where it is not to be found,

then also should I miss it. I therefore resolved this in my mind: whether it were possible for me to regulate my life according to a new rule, or at any rate ascertain the existence of such a rule, without changing the actual order of my life—a thing which I have often in vain attempted. For those things which most frequently occur in life, and in which men, judging from their acts, think supreme happiness consists, may be reduced to three, *riches, honours, and pleasures of the senses*.* By these three the mind is so occupied it is scarcely able to think of any other good. Pleasures of sense, especially, so absorb the mind that it reposes in them, and thus is prevented from thinking of anything else. But after fruition follows sadness, which, if it does not absorb the mind, at least disturbs and deadens it. The search after riches and honours also occupies the mind, especially when sought for their own sake, as if they constituted happiness. Repentance does not follow riches and honours as it follows sensual pleasures; on the contrary, the more we possess of them the greater is our pleasure, and consequently the greater our desire to increase them. Honour, or reputation, is a serious impediment, because to attain it we must direct our lives according to the wishes of others, avoiding what the vulgar avoid, seeking what men seek. When, therefore, I saw the obstacles which hindered me from following a rule of conduct different from the ordinary rule, and saw how great was the antagonism between the two, I was forced to inquire which of the two would be most useful to me; for, as I said just now, I seemed to be abandoning the certain for the uncertain. But after meditating thereupon, I found, first, that in giving up the ordinary advantages I really renounced only an uncertain good for another equally uncertain, the latter, however, being only uncertain as to the possibility of my attaining it. After assiduous meditation I found that I was only quitting certain evils for a certain good. For I saw I was in the greatest danger, which forced me to seek a remedy,

* Spinoza's language is stronger, but to translate more literally would, perhaps, mislead; he says: *Divitias, honorem, atque libidinem*.

even an uncertain one; as a man in sickness, seeing certain death before him unless something be done, will seize at any remedy, however vague, for in that is all his hope. And, indeed, all those things which the vulgar seek were not only unable to furnish me with a remedy, but were obstacles, because they are frequently the very causes of the ruin of those who possess them, and always of those who are possessed by them. Many are the examples of those who have suffered persecution, nay, death, on account of their wealth, or who, in the hope of gain, have exposed themselves to perils, and paid for their folly with their lives. Nor are there fewer examples of men who, in the pursuit of honours, or in defending them, have become most miserable. Lastly, there are innumerable examples of those who by excess of sensual pleasures have accelerated their death. Hence the evil seems to me to arise from this: that all our happiness and unhappiness depends solely on the quality of the object which we desire. For those things which are not desired arouse neither quarrels nor sorrow if they escape us, nor envy when others possess them, neither fear nor hate, in a word, no commotion of the mind; whereas all those evils belong to our attachment to perishable things, such as those just spoken of. But love of what is eternal and infinite nourishes the mind with joy only, and is never touched with sorrow, and it is *this* good so eminently desirable that all men should seek. Yet it was not without meaning that I said, *to consider the matter seriously*. For although I clearly perceived this in my mind, I could not banish all love of wealth, honours, and sensual pleasures. But I found that so long as my mind was occupied with these thoughts so long was it turned away from passions, and seriously meditated the new rule of life, which was to me a great consolation. For thus I saw that these evils were not incurable; and, although at first these serious moments were rare and brief, yet afterwards, as the *true good* became better known, they became more frequent and more durable, especially when I saw that the acquisition of wealth, glory, and sensual

pleasures was fatal so long as these were sought for their own sakes, and not as means to an end. If, indeed, they are sought as means then they have their value and do little hurt; on the contrary, they are very useful towards the proposed end.

‘Here let me say what I mean by the *true good*, and what is the *supreme good*. To understand these rightly, it must be noted that *good* and *evil* are only relative, so that one and the same thing may be called good or evil according to its different aspects; and the same of perfection and imperfection. Nothing considered in itself can be called perfect or imperfect; as we shall understand when we see how all things exist according to the external order and according to the certain laws of nature. But as human weakness cannot follow this eternal order by its own thought, and meanwhile man conceives a human nature much surpassing his own, to the height of which nothing seems to prevent his arriving, he is incited to seek the means of arriving at this perfection, and everything which seems to lead there is called by him the *true good*. But the *supreme good* would be for him and others, if possible, to enjoy this higher nature. And what is this? We shall hereafter show that it is the knowledge of the union of the mind with all nature. This then is the end I must seek: to acquire this higher human nature, and use every effort for others to acquire it also; that is to say, it is necessary for my happiness that many others should think with me, so that their intellects and their desires should accord with mine; for which two things are necessary: *first*, to understand Nature so as to be able to acquire this higher human nature; *next*, to form such a society as will admit of the greatest number arriving easily and securely at such perfection. Therefore our tasks are a *moral philosophy* and the *education of children*; and, as health is a not unimportant means for the end we have in view, the whole science of *medicine* must be added: and, as the arts make many difficult things easy, and aid us by saving our labour and time, we must not omit *mechanics*.

But above all must be sought a method of improving the understanding, and as far as possible to correct it from the beginning, so that, warned against error, it may know clearly.’

This passage must not be read as mere oratorical preamble, but as the serious expression of his conviction. His life testifies to its sincerity. What he said, he did; what he wrote in philosophic treatises, he tried to live in philosophic earnestness. He was very poor, and was often tempted—tempted by money, tempted by vanity, tempted by his senses; but these lures were powerless. It was not with him as it is, unhappily, with so many of us who mean to live a noble life, and wish to act up to our best convictions, but who find that the allurements, which are easily vanquished while they remain at a certain distance, become our masters when they press closely on us. Spinoza was a ‘God-intoxicated man’ not only in the ardours of speculative activity, but in the conflict of daily life, believing in God as an ever-present reality. Amidst temptation he continued steadfast to the divinity of those aspirations which in solitude his soul had seen to be divine. Many men before and since have been poor and obscure, have despised wealth, have been careless of fame, even when they have shown no touch of vain-gloriousness in their contempt and noisy independence; but not many have been offered the opulence and glory they despised, and have continued, after the offers, to leave them disregarded and untouched. Many men have written eloquently and sincerely of quitting the perishable things of this world for Truth; but few have shown an equal earnestness in translating this eloquence into conduct. Spinoza was one of the few; and it is well that this should be known, because the deep repugnance which is felt against his speculative opinions arises less from a sense of their falsehood than from a belief that such opinions cannot enter the mind without necessarily dissolving all moral principles. I have no hesitation in avowing that many of Spinoza’s conclusions are such as must shock all Christians, and most Theists, that

to him even more than to Kant should be applied the epithet of 'all shattering' (*alles zermalmende*), that logically there is but a trivial distinction between his Acosmism, which makes God the one universal being, and Atheism, which makes the cosmos the one universal existence. Observe, I say 'logically' there is but little difference; spiritually, the difference is profound. His Acosmism may denote what is scarcely distinguishable from Atheism; it connotes something utterly opposed to Atheism; and we know that he explicitly and emphatically repudiated Atheism. The horror which many feel at his opinions is entirely due to the rooted prejudice that morality is inseparable from certain special dogmas which, if rejected, leave the man a prey to all animal and ignoble passions. But no one was more rigorous than he in the subjection of all passions and all egoisms to the love of God and obedience to the Divine will. The love of God is everywhere proclaimed the highest good, the noblest aim, the only source of permanent felicity. And when Isaac Orobio accused him of getting rid of all Religion in the escape from superstition, he gravely asked, 'Is it to cast off Religion to acknowledge God as the supreme good, and to love him with singleness of soul, which love must constitute our highest felicity, our most perfect freedom? to believe that the reward of virtue is virtue, and the punishment of ignorance and impotence is ignorance? and that everyone should love his neighbour and obey the laws?'* He denied that true morality has its basis in fear of punishment. To substitute that fear for the love of God, is to show that we love something better than God.

Spinoza shocks those who regard him from an antagonistic standing point. No sooner is the mind disengaged from the trammels of old prejudice than we learn to look on his argu-

* 'An quæso, ille omnem religionem exuit, qui Deum summum bonum agnoscendum statuit, eundemque libero animo ut talem amandum? et quod in hoc solo nostra summa felicitas summaque libertas consistit? porro quod præmium virtutis sit ipsa virtus, stultitiæ autem et impotentiae supplicium sit ipsa stultitia? et denique quod unusquisque proximum suum amare debet et mandatis summæ obedire?'—*Epist.* xlix. p. 294.

ments as on the arguments of Parmenides or Algazel; we ask whether they are true or false, whether they can be taken up into our philosophy, or rejected from it? This is the attitude of Germany. To some extent it is the attitude of France. It will become the attitude of England. For myself I cannot accept Spinoza's system; but I see how it was perfectly compatible with his own pure morality, and do not fear lest it should disturb the morality of anyone who could conscientiously adopt it. We may reject all ontological schemes, and deny the competence of the ontological method; but if we are to employ that method, and put our trust in its conclusions, the results of Spinozism are quite as capable of dovetailing with the needs of a noble life as any other system.

And here I may make a remark of general application, namely, that the incalculable importance of morality so presses itself upon consideration at every turn, and necessarily forms so large a part of every thinker's meditations, that no rational system can be constructed which does not conform itself to the highest prevalent conceptions of the moral law. Hence we may observe, as a rule, that in proportion as a speculative system departs from the principles currently accepted in philosophy, it seeks to gain increased support from morality, thus recovering the hold of men's minds in one direction which it has given up in the other. If this be so, it shows how misguided is the anger which assails a new thought from terror at its moral consequences. Our first question should never be, To what will this lead? but, Is this true?

Spinoza gained his livelihood by glass polishing. The rules of the Jewish doctors enjoin the necessity of learning some mechanical art, as well as the Law. It was not enough for a Rabbi to be a scholar, he must also have at command the means of subsistence. Spinoza, fond of optics, had learned the art of polishing lenses; and he acquired a certain celebrity for the excellence of his workmanship, as we see in

a letter from Leibnitz. He also relaxed his mind occasionally with employing his pencil. Colerus had a portfolio of portraits by him of several distinguished men; among these was a sketch of Spinoza himself, in the dress of Masaniello.

In 1660 we find him living in Rhynsburg, near Leyden; and there among his friends we notice Henry Oldenburg, who had been the Hague consul in London, when Cromwell was Protector. He was also the intimate friend of Robert Boyle, and helped in the foundation of the Royal Society of Great Britain. The very first paper in the Transactions of that now illustrious society bears his signature. He writes from London to Spinoza in the year 1661, recalling their pleasant discussions on God, thought, extension, the union of the body and soul, and the philosophy of Descartes and Bacon.*

Another friend is Simon de Vries, who was true to him through life, and whose veneration is prettily expressed in that passage of a letter wherein he exclaims, 'Thrice happy is the young man living in the same house with you, who can see you at breakfast and dinner, who can walk with you, and listen to you on the highest subjects.' Upon which Spinoza characteristically replies, 'You need not envy my young inmate, against whom I jealously guard myself, and to whom I earnestly beg that you and other friends will not communicate my opinions until he has grown more ripe for them. At present he is too childish and volatile, impelled rather by curiosity than love of truth. But I hope that he will put aside these faults as he grows older; nay, as far as I can judge of his disposition, I feel sure of this, and on this account I take great pains with him.'† It was this young man that Spinoza instructed in the Cartesian philosophy, and for his use he began the composition of the 'Principles of Descartes geometrically demonstrated;' not for Simon de Vries, as is commonly said. This work was afterwards completed, and an appendix added, in which Spinoza indicated his chief points of divergence from Descartes. It was published by Meyer in 1664, and produced considerable stir among the Cartesians.

* SPINOZA: *Epist.* i.

† VLOTEN: *Supplementum*, p. 295.

He left Rhynsburg for the Hague, and there among his warm friends was the celebrated and unfortunate Grand Pensioner, Jean de Witt. 'In all Holland,' says Mr. Froude, 'there were none like these two; they had found each other now, and they loved each other as only good men love. From him Spinoza accepted a pension, not a very enormous one—some thirty-five pounds a year; the only thing of the kind he ever did accept. Perhaps because De Witt was the only person he had met who exactly understood what it was, and weighed such favours at their exact worth, neither less nor more.'

This interpretation is consistent with all we know of Spinoza. On the death of his father, his two sisters, Rebecca and Miriam, tried to keep him from his inheritance, probably thinking that an excommunicated heretic had no claim on the money of the faithful. He appealed against them in a court of law; gained his cause, and having thus satisfied his sense of justice, gave up the contested property as a free gift, thus saving his sisters from fraud, and himself from an indignity. Later in life his affectionate pupil, Simon de Vries, brought him a thousand florins, entreating him to accept it as a slight payment of the heavy debt the pupil owed the teacher. Spinoza laughingly assured him that he was in no need of money, and that such a sum would turn his head. Simon then made a will, bequeathing the whole of his property to Spinoza, who, on hearing of it, at once set off for Amsterdam to remonstrate against an act so unjust to Simon's brother. His arguments prevailed. The will was destroyed, and the brother finally inherited. Now came a struggle of generosity. The heir protested that he could not accept the property unless he were allowed to settle five hundred florins a year on the disinterested friend; and, after some debate, Spinoza agreed to accept three hundred.

In 1673 Karl Ludwig, the Elector Palatine, anxious to secure so illustrious a thinker, offered him the chair of philosophy at Heidelberg. But whatever allurements there

might otherwise have been in such a proposal was destroyed by the intimation that the Elector hoped he would avoid collision with existing creeds. 'I have never had any intention of teaching in public,' replied the philosopher, 'and if I give my time to expounding the first questions of philosophy, I shall perhaps not be able to make any advances in its deeper questions as I desire. Nor do I exactly understand within what limits my philosophy *can* be made to avoid collision with established creeds. Schisms do not arise so much from a genuine love of religion as from the interests and passions, and from that love of contradiction which prompts men to falsify and anathematise even what is true.*' And, therefore, the professorship was declined. Louis XIV. offered him a pension if he would dedicate his next work to him, but received for answer that the philosopher had no intention of dedicating anything to his majesty.

From these examples we may conclude that his acceptance of the pension from De Witt was grounded on a perfect confidence in the motives and the character of his friend. There is often as much generosity in accepting as in conferring an obligation; and as much vanity as independence in its rejection. All depends upon the nature of the existing relations, and the character of the friends.

A little incident, unnoticed by his biographers, but interesting as an indication of the state of opinion in those days, may here be related. If there is an error one might have expected the clear and penetrating intellect of Spinoza to have seen through, it is the error of the Alchemists: but this expectation is grounded on a misconception. Alchemy seems absurd to us because experience has abundantly shown that the processes of the alchemists were futile. In those days it seemed plausible enough; and that which conquered the assent of eminent men was not scientific deduction, but a striking fact. J. F. Schweitzer (known in Europe by his

* ' . . . Quippe schismata non tam ex ardenti religionis studio oriuntur quam ex vario hominum affectu vel contradicendi studio, quo omnia etsi recte dicta sint, depravare et damnare solent.'—*Epist.* liv. p. 304.

Latinised name of Helvetius) was then physician to the Prince of Orange, and notorious as an antagonist of the alchemists. It was, therefore, their interest to convert him. On the 27th of December, 1666, he received the visit of a stranger, who declined to give his name, but who came, he said, in consequence of the dispute between Helvetius and Kenelm Digby, and was prepared with material proofs of the existence of the philosopher's stone. After a sharp discussion, the stranger handed him an extremely small portion of yellow metallic powder, having the aspect of sulphur, assuring him it would transmute an ounce and a-half of lead into gold. He departed. Helvetius, in the presence of his wife, made the experiment. To his astonishment it succeeded. There was the ingot of gold, which all the goldsmiths and assayers of the Hague pronounced to be pure. He was startled into credulity. The fact mastered him, as striking facts so often master imperfect scepticism. He wrote an account of the whole adventure, and avowed his faith in the alchemy which hitherto he had derided. This made no little stir. Among the rest Spinoza was eager for precise details, and we have a letter from him dated 25th of March, 1667, in which he says, 'Your last letter of the 14th reached me safely, but various causes prevented my replying at once. I spoke to Vossius about the Helvetius affair, and he burst out laughing, wondering how I could occupy myself about such trivialities. But I, disregarding this contempt, went to the goldsmith who had assayed the gold, and whose name is Brechtett. He assured me that, in spite of Vossius, the gold during the fusion increased in weight on some silver being thrown into the crucible; hence, as he firmly believes, this gold which changes silver into gold, must contain something peculiar in itself. Not he alone, but divers other persons who were present at the time, assured me that such was the case. After this I went to Helvetius, who showed me the gold and the crucible still having a little gold attached to its inside, and told me that he had strewn scarcely a quarter of a grain on the molten lead. He added that it

was his intention to publish a brief history of the affair. This is what I have been able to learn of the matter.'

The trick which imposed upon Helvetius was adroit, and the knowledge of chemistry was too imperfect, and the nature of experimental evidence too little understood, to suggest the presence of a trick. Spinoza, like the others, seems to have relied upon the purely irrelevant testimony of goldsmiths and bystanders; and on similar testimony spirit-rapping, witchcraft, and other delusions have been credited.

The next, and perhaps the most considerable, event to be recorded in Spinoza's life is the publication in 1670 of the *Tractatus Theologico-Politicus*. It is one of the boldest books ever written; and it was written at a time when boldness was far more perilous than it has been since; when philosophers had to use elaborate precautions in advancing even small heresies, and their skill was shown in insinuating what they could not openly avow. Spinoza had for some time resisted the entreaties of his friends; he foresaw the tumult that his opinions would arouse. Oldenburg writes to him in 1662, urging him to brave the ignorant mob and rely on the sympathy of the learned (a pretty reed to lean on!); and in 1665 he is still more pressing. 'What do you fear? Why hesitate? Begin, and you may be confident of the applause of all real philosophers. I never will believe that you would write anything against the existence and providence of God; and provided that these solid grounds of religion are respected, it is easy to excuse or defend any philosophic opinions.' Yet Oldenburg himself held very different language after publication; and proved that Spinoza's hesitation was well founded. What finally determined him is not known. Most probably a deep sense of the importance of his views at a period of widespread unrest, a period rife with sophisms. Holland was reposing on the laurels she had won in her long and desperate struggle against Spain. Having freed herself from a foreign yoke, she might now have completed her canals, extended her commerce, and enjoyed the amenities of peace, had not theological faction disturbed it.

A land of political freedom, an asylum for persecuted free-thinkers, it was torn by theological strife. The persecuted Jews might flock there from Portugal and Spain; the Protestants of France and Belgium found shelter there; but on their arrival these fugitives witnessed conflicts almost as savage as those from which they fled. Toleration was awarded to political thought; various religions were allowed to erect their churches; but within the pale of the State Church there was the old strife. What Spinoza wished to teach men was the essential nature of Religion, and the political nature of a church. He wished to see a complete separation of the temporal and spiritual powers, giving to the Church a purely political significance in outward observances, and leaving individual conscience free as to opinions. The State has a right to determine ceremonies and observances; but it violates every principle of justice if it attempts to coerce opinions or the expression of opinions. It would be impossible for men to continue to live in society unless each gave up his right of action in deference to the laws established for all. 'The right of action on his individual judgment ceases; but the right of action only, not the right of reasoning and judging.'

I shall have to speak more particularly hereafter of this book, which was everywhere condemned, interdicted, and, above all, 'refuted.' Even free-thinkers were staggered; yet it found some energetic admirers, who printed it under false titles, translated, and abridged it, thus disseminating its ideas. In England an abridgment appeared in 1720, and in 1737 a complete translation. What Spinoza thought of his 'refuters' may be gathered from a passage in one of his letters.* 'The other day I saw the book which the Utrecht professors have been writing against me hanging in a bookseller's window, and from the little I had time to read of it, it seemed not worth reading, much less answering. I let the book and its author alone. Mentally smiling, I thought how

* *Epist.* l. p. 299.

the men who are most ignorant are always those most audaciously ready to write.'

This *Tractate* made Spinoza's house the house of call for lion-hunters. Foreign ministers, foreign philosophers, men who admired him, men who execrated him, and men who were to 'refute him,' came to occupy his leisure with their talk. He conversed very freely with them, sketching all the while, often taking their portraits. Among these visitors we shall only here note Leibnitz, who, although he plagiarised his celebrated philosophical conception of the pre-established harmony from Spinoza, never spoke of him but in terms unworthy of both these great intellects. This much is to be said for Leibnitz, however, that he never thoroughly understood Spinoza, and was shocked at the results of the system he so misconceived. If he never understood the simple Locke, we need not wonder that he failed to penetrate the meaning of Spinoza; that he did fail is conclusively and almost ludicrously shown in the posthumous work published by an admiring disciple,[†] of which I shall take no further notice. The plagiarism of the pre-established harmony has been placed beyond a doubt. Nevertheless, whether Leibnitz understood or misunderstood Spinoza, one would have been glad of some record of their meeting and conversation.

The murder of De Witt must have been a great shock to Spinoza. It was the only occasion on which he is known to have lost all control over his emotions; and it must have recurred to him with solemn feeling when, on a visit to the great Condé, the report arose that he was a political spy, and the populace surrounded the house where he lived. 'Fear nothing,' he said to his terrified landlord; 'it is easy for me to justify myself. There are those who know the object of my journey. But whatever may arrive, as soon as the mob assembles, I will go out and meet them, even though I share the fate of De Witt.'

Annoyed at being misunderstood on points which seemed

[†] *Réfutation Inédite de Spinoza. Par Leibnitz. Précédée d'un Mémoire par M. FOUCHER DE CAREIL. Paris, 1854.*

to him so clear, he shrank from the publication of his *Ethics*; and accordingly that work only saw the light after his death. He was timid and retiring, ill suited to the world and the world's ways, especially unsuited for conflict. A severe mysticism, like his, was not for vulgar minds. It wanted even the emotion which could commend it to mystical minds. For the peculiarity about him, that which distinguishes him from all other thinkers, is that he was a mystic whose mind moved with geometrical rigour and clearness; and his severe rigour of abstraction and deduction are as repellent to the vague emotional tendencies of the mystical mind as the intense disinterestedness and passionlessness of his system are repellent to the ordinary mind.

Let us glance at his private life. Though very poor, from his scanty pittance he had something to spare for the necessities of others. On looking over his papers after his death, it was found that one day his expenses amounted to three halfpence, for a *soupe au lait* and a little butter, with three farthings extra for beer; another day, gruel, with butter and raisins, which cost him twopence halfpenny, sufficed for his epicurism; and as his biographer Colerus says, 'Although often invited to dinner, he preferred the scanty meal that he found at home to dining sumptuously at the expense of another.' In company with a few neighbours, he sat at the chimney corner, smoking his pipe and talking to them of what they could understand, not disturbing their creeds by any obtrusion of his own. No vanity of proselytism made him trouble the convictions of those unfitted to receive new doctrines. When his landlady, feeling, perhaps, that the assurance of so good and great a man was almost equal to the priests, asked him whether he believed she could be saved by her religion, which she knew was not his, he replied, 'Your religion is a good one; you ought not to seek another, nor doubt that yours will procure salvation, provided you add to your piety the tranquil virtues of domestic life.' Nor was this, as some might suppose, the mere evasion of one who chose not to commit himself by

exposure of his heretical opinions; it was a part of the solemn earnestness with which he looked at life and accepted faith. Read the fourteenth chapter of the *Theological Political Treatise*, and see how he distinguishes between what is essential and what collateral in religion; how faith in God and love of God, with the consequent love of mankind, are in his eyes the sum of all religion; how, even, regarding religious dogmas, it is not essential that they should be true, so that they be truly believed; and how it by no means follows that those who can give the best reasons for their faith are truly the most faithful, but, on the contrary, those who live most according to justice and charity. He knew his hostess was not wise, but he saw that she was virtuous.

The children all loved him, and for them he would bring one of his lenses to show them the spiders magnified. It was his amusement to watch insects. The sight of spiders fighting would make the tears roll down his cheeks with laughter; a trait which Dugald Stewart thinks 'very decidedly indicates a tendency to insanity;'* and satisfactorily accounts for the horrible doctrines of Spinozism. Hamann sees in it only the sympathy of one web-spinner for another: 'His taste betrays itself in a mode of thought which only insects can thus entangle. Spiders and their admirer Spinoza naturally take to the geometric style of building.'† This is only surpassed by Hegel's interpretation of his consumptive tendency as in harmony with his philosophy, in which all individuality and particularity were resolved into the One Substance.‡

He had been a delicate child, and although at no time

* DUGALD STEWART: *Dissertation prefixed to Encyclo. Brit.* Note LL. So readily are accusations made that even this amiable writer thinks it probable that Spinoza learned his irreligious principles from the chief school of Atheism, the Synagogue of Amsterdam, 'where without any breach of charity (!) a large proportion of the more opulent class may be reasonably presumed to belong to the Sadducees.'

† HAMANN: *Schriften*, i. 406.

‡ The play on words cannot be rendered in English: 'diese Schwindsucht übereinstimmend war mit seinem Systeme, in dem auch alle Besonderheit und Einzelheit in der Einen Substanz verschwindet.'

positively an invalid, he had always been weakly. The seeds of consumption slowly but inevitably undermined his strength, and on Sunday, 22nd February, 1677, he was so feeble that his kind host and hostess left him reluctantly to attend divine service. He feared that he was sinking. But he entreated them to go to church as usual. On their return he talked with them about the sermon, and ate some broth with a good appetite. After dinner they again went to church, but left the physician by his bedside. On their return all was over. At three o'clock he had expired in the presence of the physician—who paid himself by taking a silver-handled knife and what money lay on the table, and departed.

He died in his forty-fifth year, in the maturity of his intellect, but not before he had thoroughly worked out the whole scheme of his philosophy.

§ II. HIS DOCTRINES.

Although by its geometrical form Spinoza's system stands as it were apart from every other system, a slender acquaintance with the evolution of philosophy enables us to recognise its affiliations with those that have preceded it. In particular we are aware of this system being only one more expression of the irrepressible yearning after unity which may be recognised in all speculation; it is one more effort to place Pantheism on a demonstrable basis. Had it not been for his method, he would at once have been claimed by the mystics. But his method and his language are so unlike the method and language of mystics that his conclusions startle and repel the very minds which have really most affinity with them; and this also in some degree, because the unsparing rigour of his logic and the unhesitating sincerity with which he follows it bring into prominence ideas which are either overlooked or suppressed by thinkers less rigorous or less sincere.

The fervour and candour of his beautiful and fearless

i.e. Spinoza: a rationalist?

spirit act upon our minds with searching and beneficent effect. His sincerity challenges our own. We cannot meditate on his thoughts and remain in apathetic vagueness. We must push to a conclusion. We must accept his teaching or refute it; and to refute it, we must reinvestigate the pretensions, not of his method only but of Metaphysical Method itself. It is on this ground that he merits the epithet of 'all-shattering.' A serious study of the *Ethics* may thus be a drastic purge clearing the mind of all the humours and vapours of Ontology. It was this to me. I never hoped to find terra firma in the boundless marsh of metaphysics after I had clearly seen the reasons which rejected Spinozism.

An attempt will here be made to exhibit the cardinal points of the doctrine. I cannot pretend, in reasonable limits, to anything like an exhaustive treatment, but only to furnish as it were an introduction. And before doing even this, it will be requisite to glance at the work by which Spinoza is more generally known, the *Tractatus Theologico-Politicus*, and to indicate its relation to modern Rationalism which it has profoundly affected. While the *Ethics* must be acknowledged to have penetrated deeply into German Philosophy, the *Tractatus* may be almost considered as the parent of German Rationalism. The various schools of criticism, as is well known, bring to the interpretation of Scripture principles which greatly alter the significance of many doctrinal points. 1. The stricter interpretation of the text, initiated by Ernesti, Michaelis, and Semler, who sought by the application of *philological* canons to ascertain the meaning which the biblical writers attached to their words, and sought thus to clear away the incrustation of successive depositions of opinion which in the lapse of ages had gradually hidden the original significance. 2. The *rationalistic* interpretation of Eichhorn and Paulus, who explained the miraculous narratives as the naïve, or superstitious, investiture given by the Hebrew mind to real historical events, which were in accordance with the order of nature, and only seemed miraculous

because not understood. 3. The *moral* interpretation of the Kantists, who sought to disengage from the mixed contents of the Scriptures the moral element which approves itself to reason. 4. The acute application to the Old Testament of *historical* criticism, by which De Wette and others have endeavoured to demonstrate that the Pentateuch is a compilation of comparatively late origin, and that the subsequent historical books are unreliable. 5. The *mythical* interpretation, which is a result of modern research into the character of early national records and mythologies.

These five methods of interpretation are all more or less anticipated in the critical observations and rules of interpretation embodied in Spinoza's treatise. Wiser than the majority of critics who succeeded him, and who profited by the labours of a century of research, Spinoza saw clearly that the influences which determined so complex a result as the Hebrew Scriptures must themselves be complex, and therefore to attempt an explanation of these writings as the manifestation of a single tendency must issue in failure. In the second, third, and sixth chapters of the *Tractatus*, the rationalistic, philological, and moral methods will be recognised at once; and in the sixth chapter the general unreliability of historical documents and the mythical tendency of the human mind are clearly enunciated. There is room for doubt indeed as to the nature of Spinoza's own view of the Scriptures: two opinions seem to be expressed in different passages: one which regards the Scriptures as containing an exceptional revelation, differing not only in degree but in kind from all other revelations (he speaks of the prophets other nations have possessed), and consequently, although to be interpreted by reason, having a higher source than reason; the other opinion, which regards the Scriptures as exceptional only in so far as they contain a deeper wisdom and a higher morality, in this sense also a revelation, but one differing in degree, not in kind, from other revelations. Had Spinoza's purpose been theological, he would doubtless have avoided any such ambiguity; but his purpose was practical; he dealt

with the religion which he found established, and tried to make those who followed it follow it according to reason. The treatise was theological only in a subordinate degree; it was theologico-political—the object was political. He did not want to settle points of theological controversy, he wanted to inculcate principles of liberty and toleration. Read his exposition of the real Catholic faith, towards the close of the fourteenth chapter, and his theological position will be quite clear.

Another apparent anticipation of modern views is seen in those passages in which he speaks of Christ as a higher manifestation of the Divinity than any other member of the human race—as the actual representative of Ideal Humanity.* I say *apparent* anticipation, for his words are susceptible of another interpretation, and it is also possible to understand them as having been uttered from a point of view lying between his actual opinion and the opinion he is controverting as an accommodation to the conviction of his readers. We have, however, in his letter to Oldenburg † an explicit statement of his meaning. Oldenburg told him that people said he concealed his real opinion about Jesus Christ, the Redeemer of the world and sole Mediator for men, as also about the incarnation; upon these points Oldenburg begs him to open his soul frankly. Spinoza replies in this language: ‘To show you undisguisedly my opinion on that point, I answer that it is not absolutely necessary to know Christ according to the flesh; but it is very different when we speak of that Son of God, that is to say that Eternal Wisdom manifested in all things, and yet more fully manifested in the human soul, and far above all in Jesus Christ. For without this no one can attain the state of beatitude, since it alone teaches us what is true and what is false, what is good and what is bad. And because this Wisdom, as I have said, was manifested in Jesus Christ in the fullest way therefore his disciples, to whom it was revealed by him, could preach it, and they showed that they could glory in being

* See especially chaps. i. and ii.

† *Epist.* xxi.

filled with the spirit of Christ more than other men were. For the rest, when certain churches add that God himself assumed human nature, I have expressly warned the reader that I do not understand what is said; indeed to speak freely, it seems to me as absurd as if they said that a circle had put on the nature of a square.’

This opinion is one which coincides with the cardinal position in Schleiermacher’s system; and with this, and other passages before us in which a divine mission is attributed to Moses, we need not wonder if Schleiermacher and Herder in perfect sincerity claimed Spinoza as a Christian, since in their sense of the word Christianity was as compatible with the Pantheism of Spinoza as it has been with other modifications of Pantheism. The English theologian will probably deny the compatibility of Christianity with any form of Pantheism; for on a rigorous interpretation of Christian theism the two *are* irreconcilable: but in Germany this difficulty is seldom felt, and Spinoza’s teaching is accepted by sincere Christians.

There is one more passage in the *Tractatus* which may arrest us for a moment. It is but three lines in the ninth chapter where he speaks of the Kabbalists, whom he designates as ‘charlatans,’ adding that their folly surpasses description. Spinoza, we are frequently told, ‘borrowed his system from the *Kabbala*’; at other times we hear that he ‘did nothing but modify the system of Descartes.’ Such accusations are singularly rash, and spring as often from a secret desire to depreciate a great man as from the levity of ignorance. I am not acquainted with the doctrines of the *Kabbala*; nor indeed are the most of those who prefer the charge; but if the *Kabbala* contain Spinoza’s doctrine, why have not others besides Spinoza rescued it? All Europe venerates Spinoza; who now studies the *Kabbala*? In truth, the charge of borrowing is frivolous; some resemblance there may be, must be, between ideas in the *Kabbala* and ideas in the *Ethics*; a system of philosophy does not stand alone, cut sheer off from all connection with the ideas of other systems;

the same law of organic conformity which makes the whole zoological series one, without preventing the independent individuality of each animal, holds good in the world of thought. We may inquire what resemblances exist, without seeking to break down the barriers of organic independence. Yet this is constantly attempted. First men deny that a doctrine is true, and next they deny that it is new. They seem to fancy that truth can be waved aside by exclaiming: 'Ah! that is borrowed from Aristotle; or that is what Bacon has said.' If Aristotle and Bacon did say it, so much the better; the truth which no one has had a glimmering of before us will rarely be repeated after us. Spinoza profited by the wisdom of his age, and thought the thoughts which others unknown to him had also woven into systems; but if ever there was an original and independent thinker Spinoza was that thinker.

The study of the *Tractatus* requires no peculiar preparation. The book is not attractively written, but is perfectly intelligible. It is otherwise with the *Ethics*; the transparent clearness of the language and the mathematical rigour of the composition only serve to make any initial misconception more misleading. Spinoza uses words in senses which he carefully defines, but he uses words which are generally interpreted in senses removed from those he assigns to them; and consequently a reader not duly warned is apt to disregard the definition, and to read Spinoza as he reads an ordinary writer. This mistake is almost inevitable on the part of those who get his doctrine at second hand. For example, they meet with the familiar word Substance, which in their service generally connotes ideas carefully separated from the idea of God; and this word they find chosen by Spinoza to designate God. In spite of definitions, in spite of etymological and philosophical justifications, in spite of an admission that the *substans*, or underlying reality and ever living existence, must indeed be God, the old connotations exercise an intolerable tyranny, and the coercion of

words over thoughts is such that most men find it impossible, and all men find it difficult, to dissociate the idea of Substance from those suggestions of transitory and ignoble phenomena which the word commonly connotes. Hence when Spinoza says that God is the only Substance, he seems to be affirming the crudest atheism. Had he used Greek instead of Latin, and called the substance Noumenon, this association would have been escaped. Whenever you meet with the word Substance in his teaching, substitute for it the phrase 'ground of existence,' and you will remove a diffracting medium which greatly obscures the meaning. God is existence. He alone truly exists. Whatever else may be conceived as existing exists in and through him; it is a manifestation of his being. This also is the language of St. Paul, which is chosen by Spinoza as his epigraph. 'In Him we live and move and have our being.' Is it not curious to note how slight a verbal change will dispel the common charge of atheism, and show that in denying the reality of the transitory world Spinoza affirmed the reality of God as the one fountain of all life.

A second ambiguity lies in the fourth axiom: 'the knowledge of an effect depends on, and implies, the knowledge of its cause.' Interpreted in the ordinary sense, this axiom is absurd; and Mr. Hallam so interpreting it was justified in qualifying it as grounded on a fallacy. 'The relation between cause and effect,' he said, 'is surely something perfectly different from our perfect comprehension of it, or indeed from our having any knowledge of it at all.' But the fallacy does not lie there. The axiom does not affirm that men are incapable of recognising a sequence while ignorant of an antecedent; as if a man receiving a blow in the dark could not recognise the pain (effect of the blow) until he had recognised the striker: it means that a complete and comprehensive knowledge of the effect implies a complete and comprehensive knowledge of the cause, for an effect is a cause realised; and 'things which have nothing in common cannot be understood by means of each other, i.e.

the conception of one does not involve the conception of the other.' Thus if an effect be different from its cause its conception does not involve the conception of the cause, but if it be the same as the cause, then the conception of the one involves that of the other, *ergo* the more complete our knowledge of the one the more complete our knowledge of the other. Spinoza is rigorously consistent. We may object, *in limine*, to his assumption that we can know anything whatever of cause, beyond the fact of an antecedent group of conditions, and of effect, beyond the fact of a consequent group of conditions; but, granting his postulate, we must accept his conclusions; and very important conclusions are drawn by him from this conception of cause.

With these indications of the necessity of carefully ascertaining the sense in which he uses terms, let us pass to the consideration of the relative position of his system among systems.

The relation of the Finite to the Infinite, the creation to the Creator, has been an eternal problem of ontological research; a problem which no man has solved; and no man can be blamed if he find it insoluble. Three answers have been given at various epochs; and only three seem possible. Every system is an acceptance of one of these answers, under modifications more or less pronounced.

First Answer: There are two coeternal principles: Mind and Matter.

Second Answer: There is but one eternal principle, the source and reality of all existence. This principle is sometimes conceived as Mind, material phenomena being thoughts—objects in representation, not objects *of* representation; and sometimes as Matter, mental phenomena being cerebral activities.

Third Answer: There is but one eternal principle, the source of all existence, but not its reality; the creator of the universe, but apart from it.

The peculiarity of this third answer is its evasion of the primal difficulty—creation—which is thus postulated as a

pure act of power working upon no material whatever. God is not conceived as fashioning the universe out of existing elements: this is the old Grecian hypothesis of a prime mover. Nor, on the other hand, is he supposed to have drawn the material from himself: this is the emanation hypothesis; it identifies the universe with God; which is pantheistic. God is conceived as distinct from the universe both in power and in essence; and the mystery of creation is cleared up in the light of omnipotence. A fiat goes forth; the universe is realised. The creative Will condenses Nothing into Matter. The pagans said, *ex nihilo nihil*. The Christian Fathers altered it to *ex nihilo omnia*, and dismissed the difficulty with a reference to omnipotence. They were perfectly aware of the logical contradiction. They acknowledged it to be untenable by reason. It was not meant for reason. Reason was incompetent to solve such problems.

Which of these three answers satisfied Spinoza? The unprepared reader will perhaps be surprised to learn that it was the third, or Christian, answer to which he most nearly approximated, although he modified it in a way which rendered it execrable to Christian theology. He was uneasy under the logical contradiction. He was not the man to say, *credo quia absurdum*, and to flout human reason by opposing its plain requirements. Creation out of nothing was untenable, and he would not pretend to hold it. Nevertheless he saw other difficulties in the other answers. The first separated God from the universe without furnishing a plausible interpretation of the process by which two coeternal principles came into union, or indeed how one could act upon the other. The second answer was equally at fault. As Idealism it ignored the reality of Matter; as Materialism it ignored the reality of Mind: two primal realities not to be discarded. The evidence for the existence of one was the same as the evidence for the existence of the other; yet one could not be resolved into the other. To disregard either was to violate first principles. Both must be grasped in an energetic

synthesis. That synthesis is God: the one principle having Thought and Extension as two eternal and infinite attributes, constituting its essence. Thus, given the one supreme principle, Existence, we see its necessary duplicate manifestation, as Mind, under one aspect, and under the other as Matter. This is the meaning of creation. This is the explanation of the difficulty. Creation is not the calling into existence of that which had no being out of that which has no being; nor is it the refashioning of elements which have independent being; it is the outflowing of primal energy, the activity necessary to a self-caused and self-causing existence. This universe considered as a moment in the universal life is truly a creation. From God it came, and in God it exists, not in alien difference, but in vital unity. From God all flows out, and to him all returns. Everything is a form of that which ever is. God is, and is not, Nature; identical, but not the same; he is no more to be confounded with nature than the fountain with the rivulet, eternity with time. God is *natura naturans*, Nature is *natura naturata*. The one is the energy, the other the act.

A similar line of argument solves the problem of the union of Soul with Body. By one school these words are taken as representatives of two distinct essences, irreconcilable in their nature, yet mysteriously accordant in their existence. By another school the two are resolved into one, either as Idealism, denying substantive reality to Body, which is admitted only as an act of Thought; or as Materialism, denying substantive reality to Mind, which is admitted only as one of the phenomena of body. Spinoza affirms the equal reality of both, and their distinction in a higher synthesis. They are not substances at all, but the two correlated attributes which constitute the essence of substance. Man is but a mode of the Divine Existence: his mind a spark of the Divine Flame; his body a mode of the Infinite Extension.

One more remark is needful as a preparation to the study of this system. The aim of philosophy is doubtless the solution of problems, but it is also the working out of

theorems: the problem, when solved, furnishes a means of regulating life: Ontology is the introduction to Ethics. Life is to be so regulated that the soul may achieve the highest good; and what is that but the love of God? This love must be founded upon knowledge; perfect knowledge bringing perfect love. And what is perfect knowledge? The harmony of our thoughts with the divine order. We may indeed love God without knowing him clearly; but it is impossible to have clear knowledge without perfect love; and clear knowledge is only to be gained through a method which discloses the divine order. Error and doubt arise from disorder, not from native incompetence. Truth is the harmony between the order of ideas and the order of things. Let a man begin where he ought to begin, and proceed in rigorous deduction unfolding each successive consequence, never letting drop a single link in the chain which unites things, and he will never doubt, for then all his ideas will be clear and distinct, and their order will be the order of things.* . . . Ordo et connexio idearum idem est ac ordo et connexio rerum.†

There are two methods of investigation: the vulgar and the scientific. The one starts from principles which have been accepted without examination, which are not therefore clearly understood. The other starts from principles clearly defined and accurately known. It is the latter only which can lead to true knowledge. Its type is mathematics. It comprehends every object because it understands the immediate cause of the object. Nothing arises except as the necessary sequence of what preceded it, and as the inevitable result of the nature of things. To understand any object, therefore, we must understand its connections. And these are displayed after the mathematical method.

Thus is the form chosen by Spinoza justified by his principles. It is a form, as I said, extremely unlike that of all other mystical philosophies, and by no means attractive to the ordinary mind. But it is eminently consistent. It

* SPINOZA: *De intellect. Emend.* ii. 37.

† *Ethica*, ii. prop. vii.

developes the order of the universe from a few definitions and axioms. These may be given here:—

‘ DEFINITIONS.

- I. By a thing which is its own Cause I understand a thing the essence of which involves existence; or the nature of which can only be considered as existent.
 - II. A thing finite is that which can be limited (*terminari potest*) by another thing of the same nature, e.g. body is said to be finite because it can always be conceived as larger. So thought is limited by other thoughts. But body does not limit thought, nor thought limit body.
 - III. By Substance I understand that which exists in itself, and is conceived *per se*: in other words, the conception of which does not require the conception of anything else antecedent to it.
 - IV. By Attribute I understand that which the mind perceives as constituting the very essence of Substance.
 - V. By Modes I understand the accidents (*affectiones*) of Substance; or that which is in something else, through which also it is conceived.
 - VI. By God I understand the Being absolutely infinite, i.e. the Substance consisting of infinite Attributes, each of which expresses an infinite and eternal essence.
- Explanation*: I say absolutely infinite, but not infinite *suo genere*; for to whatever is infinite only *suo genere*, we can deny infinite Attributes; but that which is absolutely infinite includes in its essence everything which implies essence, and involves no negation.
- VII. That thing is said to be free which exists by the sole necessity of its nature, and by itself alone is determined to action. But that thing is necessary, or rather constrained, which owes its existence to

another, and acts according to certain and determinate causes.

- VIII. By Eternity I understand Existence itself, in as far as it is conceived necessarily to follow from the sole definition of an eternal thing.

These are the Definitions: they need not long be dwelt on, although frequently referred to by him; above all, no objection ought to be raised against them, as unusual, for they are the meanings of various terms in constant use with Spinoza, and he has a right to use them as he pleases, provided he does not afterwards depart from this use, which he is careful not to do. We now come to the seven

AXIOMS.

- I. Everything which is is in itself, or in some other thing.
- II. That which cannot be conceived through another (*per aliud*) must be conceived through itself (*per se*).
- III. From a given determinate cause the effect necessarily follows; and *vice versa*, if no determinate cause be given, no effect can follow.
- IV. The knowledge of an effect depends on the knowledge of the cause, and implies it.
- V. Things that have nothing in common with each other cannot be understood by means of each other, i.e. the conception of one does not involve the conception of the other.
- VI. A true idea must agree with its object (*idea vera debet cum suo ideato convenire*).
- VII. Whatever can be clearly conceived as non-existent, does not, in its essence, involve existence.

To these succeed the propositions, of which only the first eight need be given here:—

PROP. I. Substance is prior in nature to its accidents.

Demonstration. Per Definitions 3 and 5.

PROP. II. Two Substances, having different Attributes, have nothing in common with each other.

Demonst. This follows from Def. 3; for each Substance must be conceived in itself and through itself; in other words, the conception of one does not involve the conception of the other.

PROP. III. Of things which have nothing in common, one cannot be the cause of the other.

Demonst. If they have nothing in common then (per Axiom 5) they cannot be conceived by means of each other; ergo (per Axiom 4) one cannot be the cause of the other. Q. E. D.

PROP. IV. Two or more distinct things are distinguished among themselves either through the diversity of their Attributes or through the diversity of their Modes.

Demonst. Everything which is in itself or in some other thing (per Axiom 1), that is (per Def. 3 and 5), there is nothing out of ourselves (*extra intellectum*) but Substance and its Modes. There is nothing out of ourselves whereby things can be distinguished amongst one another, except Substances, or (which is the same thing, per Def. 4) their Attributes and Modes.

PROP. V. It is impossible that there should be two or more Substances of the same nature, or of the same Attribute.

Demonst. If there are many different Substances, they must be distinguished by the diversity of their Attributes or of their Modes (per Prop. 4). If only by the diversity of their Attributes, it is thereby conceded that there is nevertheless only one Substance of the same Attributes; but if by the diversity of their Modes it follows that Substance being prior in nature to its modes, it must be considered independently of them; that is (per Def. 3 and 6), cannot be conceived as distinguished from another; that is (per Prop. 4), there cannot be many Substances, but only one Substance. Q. E. D.

PROP. VI. One Substance cannot be created by another Substance.

Demonst. There cannot be two Substances with the same

Attributes (per Prop. 5); i.e. (per Prop. 2) having anything in common with each other; and therefore (per Prop. 3) one cannot be the cause of the other.

Corollary. Hence it follows that Substance cannot be created by anything else. For there is nothing in existence except Substance and its Modes (per Axiom 1, and Def. 3 and 5); now this Substance, not being created by another, is self-caused.

Corollary 2. This proposition is more easily to be demonstrated by the absurdity of its contradiction;—for if Substance can be created by anything else, the conception of it would depend on the conception of the cause (per Axiom 4), and hence (per Def. 3) it would not be Substance.

PROP. VII. It pertains to the nature of Substance to exist.

Demonst. Substance cannot be created by anything else (per Coroll. Prop. 6), and is therefore the cause of itself; i.e. (per Def. 1) its essence necessarily involves existence; or it pertains to the nature of Substance to exist. Q. E. D.

PROP. VIII. All Substance is necessarily infinite.

Demonst. There exists but one Substance of the same Attribute; and it must either exist as infinite or as finite. But not as finite, for (per Def. 2) as finite it must be limited by another Substance of the same nature, and in that case there would be two Substances of the same Attribute, which (per Prop. 5) is absurd. Substance therefore is infinite. Q. E. D.

Scholium.—I do not doubt that to all who judge confusedly of things, and are not wont to inquire into first causes, it will be difficult to understand the demonstration of Prop. 7, because they do not sufficiently distinguish between the modifications of Substance and Substance itself, and are ignorant of the manner in which things are produced. Hence it follows that, seeing natural things have a commencement, they attribute a commencement to Substances; for he who knows not the true causes of things confounds

all things, and sees no reason why trees should not talk like men; or why men should not be formed from stones as well as from seeds; or why all forms cannot be changed into all other forms. So, also, those who confound the divine nature with the human naturally attribute human affections to God, especially as they are ignorant how these affections are produced in the mind. But if men attended to the nature of Substance, they would not in the least doubt the truth of Prop. 7; nay, this proposition would be an axiom to all, and would be numbered among common notions. For by Substance they would understand that which exists in itself, and is conceived through itself; i.e. the knowledge of which does not require the knowledge of anything antecedent to it. But by modification they would understand that which is in another thing, the conception of which is formed through the conception of the thing in which it is, or to which it belongs: we can therefore have correct ideas of non-existent modifications, because, although out of the understanding they have no reality, yet their essence is so comprehended in that of another that they can be conceived through this other. The truth of Substance (out of the understanding) lies nowhere but in itself, because it is conceived *per se*. If therefore anyone says that he has a distinct and clear idea of Substance, and yet doubts whether such a Substance exist, this is as much as to say that he has a true idea, and nevertheless doubts whether it be not false (as a little attention sufficiently manifests); or, if any man affirms Substance to be created, he at the same time affirms that a true idea has become false; than which nothing can be more absurd. Hence it is necessarily confessed that the existence of Substance, as well as its essence, is an eternal truth. And hence we must conclude that there is only one Substance possessing the same Attribute; a position which requires here a fuller development. I note therefore—

1. That the correct definition of a thing includes and expresses nothing but the nature of the thing defined. From which it follows—

2. That no definition includes or expresses a distinct number of individuals, because it expresses nothing but the nature of the thing defined; e.g. the definition of a triangle expresses no more than the nature of a triangle, and not any fixed number of triangles.

3. There must necessarily be a distinct cause for the existence of every existing thing.

4. This cause, by reason of which anything exists, must be either contained in the nature and definition of the existing thing (viz. that it pertains to its nature to exist) or else must lie beyond it—must be something different from it.

From these positions it follows that, if a certain number of individuals exist, there must necessarily be a cause why that number exists, and not a larger or smaller number: e. g. if in the world twenty men exist (whom, for greater perspicuity, I suppose to exist at once, no more having previously existed), it will not be sufficient, in order to show the reason why twenty men exist, to point to human nature as the cause, but it will further be necessary to show why only twenty men exist, since (per note 3) there must be a cause for the existence of everything. This cause however (per notes 2 and 3) cannot be contained in human nature itself; for the true definition of man does not involve the number twenty. Hence (per note 4) the cause why twenty men exist, and why each individual exists, must lie beyond each of them; and therefore must we absolutely conclude that everything, the nature of which admits of many individuals, must necessarily have an external cause. As therefore it pertains to the nature of Substance to exist so must its definition include a necessary existence, and consequently from its sole definition we must conclude its existence. But as from its definition, as already shown in notes 2 and 3, it is not possible to conclude the existence of many Substances *ergo* it necessarily follows that only *one* Substance of the same nature can exist.

In this style of unimpassioned deduction he proceeds,

adding link to link in the chain of demonstration, evolving a system of Theology, Psychology, and Ethics, which alternately impresses the reader with its symmetry and sublimity, and distresses him with its pitiless destruction of long-cherished beliefs, now rousing his enthusiasm for its lofty disinterestedness, now repelling him by its disregard of his personality and his hopes. God is the ever-present reality; man but a foam-bubble reflecting the transitory gleams of a diviner light. Love and resignation are the guiding ideas; and yet they lead to conclusions which alarm the reader. Unable to see where the defect in the argument lies, he is irritated at the pedantic rigour which forces his reluctant assent. No wonder if he brand Spinoza as an atheist, who sweeps away the only firm support of morality—a responsible personality. No wonder if he reject a system which resolves his personality into a mere mode of the Infinite; which dissolves in the acid of causality every shred of organic independence; which makes liberty impossible, and, depriving even God of understanding and will, sweeps the world clear of all purpose, good or evil. This is not the conception of God, or of the world, which he finds tolerable. He rises angrily against the conception of a world of unalterable sequences, where everything is determined by *conditions*, nothing by *purposes*: a system of results, not of aims. He is impatient of the logic which proves that phenomena are not brought about by a conscious intention, but are the simple sequences of God's nature.

He is called upon to renounce his own conception of a sublime Fatherhood, an Infinite Personality—greater than man by all the incommensurable difference of infinite and finite, yet like man by all the resemblance of creator and creature—in favour of a God whose essence is impersonality, who is the one Indeterminate, the Unconditioned, to whom individuality, personality, and conditions, cannot be applied without contradiction, and consequently to whom even intellect and will cannot belong, there being no analogy between the nature of God and the nature of man. Spinoza

is explicit: Although he makes Thought one of the constituent attributes of God, he denies that intellect or will can pertain to the Infinite, if by these words we mean powers similar to those in man; in God these no more resemble what we so name in man than the dog-star resembles a dog.*

If this be so, how can there be purposes in creation, i.e. final causes? With the disappearance of the intellect disappears the faculty of conceiving purposes; with the disappearance of the will disappears the power of acting in subordination to a purpose. God as existence and perfection is necessarily without aims. Men act with a purpose; and think they act in freedom, because they are conscious of desires, but not of the causes which determine these desires. A stone whirling through the air, and imagining itself to be flying, is an image of man acting and believing himself free.

I will here quote the famous Appendix on Final Causes which concludes the first book of the *Ethics*.

‘Men do all things for the sake of an end, namely, the good, or useful, which they desire. Hence it comes that they always seek to know only the final causes of things which have taken place, and when they have heard these, they are satisfied, not having within themselves any ground for further doubt. But if they are unable to learn these final causes from some one else, nothing remains to them but to turn in upon themselves, and to reflect on the ends by which they are themselves wont to be determined to similar actions; and thus they necessarily judge of the mind of another by their own. Further, as within themselves and out of themselves they discover many means which are highly conducive to the pursuit of their own advantage—for example, eyes to see with, teeth to masticate with, vegetables and animals for food, the sun to give them light, the sea to nourish fish, &c.—so they come to consider all natural things as means for their benefit: and because they are aware that these things have been found, and not prepared by them, they have been

* SPINOZA: *Ethica*, i. prop. xvii. schol.

led to believe that some one else has adapted these means to their use. For after considering things in the light of *means*, they could not believe these things to have made themselves, but arguing from their own practice of preparing means for their use, they must conclude that there is some ruler or rulers of nature endowed with human freedom, who have provided all these things for them, and have made them all for the use of men. Moreover, since they have never heard anything of the mind of those rulers, they must necessarily judge of this mind also by their own; and hence they have argued that the gods direct all things for the advantage of man, in order that they may subdue him to themselves, and be held in the highest honour by him. Hence each has devised, according to his character, a different mode of worshipping God, in order that God might love him more than others, and might direct all nature to the advantage of his blind cupidity and insatiable avarice. Thus this prejudice has converted itself into superstition, and has struck deep root into men's minds; and this has been the cause why men in general have eagerly striven to explain the final causes of all things. But while they have sought to show that Nature does nothing in vain (i.e. which is not fit for the use of men), they seem to me to have shown nothing else than that Nature and the gods are as foolish as men. And observe, I pray you, to what a point this opinion has brought them. Together with the many useful things in nature, they necessarily found not a few injurious things, namely, tempests, earthquakes, diseases, &c.; these they supposed happened because the gods were angry on account of offences committed against them by men, or because of faults incurred in their worship; and although experience every day protests, and shows by infinite examples that benefits and injuries happen indifferently to pious and ungodly persons, they do not therefore renounce their inveterate prejudice. For it was easier to them to class these phenomena among other things, the cause of which was unknown to them, and thus retain their present and innate condition of ignorance,

than to destroy all the fabric of their belief, and excogitate a new one.'

I have thus presented the two aspects of Spinoza's doctrine, neither exaggerating its mystical unction and logical rigour nor softening its harsh angles of heterodox offence. The mysticism and logic are so little to the taste of mankind in general, and the heterodoxy is so exasperating, that it is intelligible how the majority, even of charitable readers, misconceived the spirit of the doctrine, and stood aghast at its conclusions. The wonder is that many Christian thinkers could have seen through such husks, and detected the wholesome grain within. It is not often that theological and philosophical outeries are so excusable. The tumult and the wrath excited by Spinozism were indeed unreasoning. Men's minds flew off at a tangent on the first alarm, and instead of patiently following out Spinoza's thought in his own calm spirit of research, they followed it out in their hot illogical way, first thrusting conclusions upon him which he would have repudiated, and then yelling in horror at him for teaching these conclusions. But let us be just. It was only on a patient and comprehensive study that men could learn what Spinoza really taught; and this patient study they were too angry to give. Besides, the study was laborious, and vituperation was easy. If the temper of the philosophic world has changed, and a more impartial consideration has led to a loving admiration, even where accompanied with profound dissent, this very impartiality is a result of the increased liberty, which he was instrumental in developing. Whatever may be thought of his system, we must admit that from the first a strengthening and liberalising influence has rayed out from it, affecting even angry antagonists. There was something in the noble calmness and unaggressive fearlessness of his attitude which acted like a mental tonic. There was also the incidental flash of light falling on many ancient prejudices. There was the unswerving conviction in the force of truth, and in the universality of law. There was the constant exhibition of the relativity of knowledge.

Finally, there was the disinterestedness and purity of his moral views, and the quiet beauty of his own life, to answer the vulgar accusations against free thought as destructive of morality.

We find few expressions of this influence during the first years of controversy, but I do not think the influence was inoperative even then. It was, indeed, for the most part unconscious. Men thought him a monster, and said so. It was a period of theological ferment. The speculative unrest which had produced the Reformation was far from having been stilled by the Reformation. The orthodox party had, indeed, proclaimed finality. It proclaimed liberty of private judgment; but it restricted that liberty within very narrow and very arbitrary limits. Every man might read the Scriptures; but no man might read in them more than the orthodox reformers read. Comprehensive liberty was denounced as anarchy. In vain. The human mind alternately longs for, and rejects, finality. In spite of ecclesiastical thunders the movement of mind could not be arrested. Anarchists were numerous, and violent because violently opposed. While orthodoxy was on the alert to scent atheism from afar, and authority branded small heresies with the largest letters, free-thinking works became more and more numerous and noisy. The seventeenth and eighteenth centuries are specially distinguished by their free-thinking literature. The question was frequently discussed whether Atheism or Superstition were the most noxious to society,* and Atheism became the false but significant synonym of religio-eruditorum. The theological journals of the time had a special rubric under which they noticed atheistical works. But we must not too hastily conclude that many atheistical works existed; for if men denied the existence of the Devil, or even of Ghosts, they found themselves classed among the atheists.

* PRITIUS: *Dissertatio de Atheismo in se fædo et humano genere noxio*; 1695.
GRAPIUS: *Dissert. an Atheismus necessario ducat ad corruptionem morum*; 1697.
ELSWICH: *Disputatio de controversiis novis circa Atheismum*—cited in HETTNER: *Litteraturgeschichte des 18. Jahrhunderts*, dritter Theil, i. 42.

In a society thus alert for atheism, and the alarms of atheism, Spinoza's writings must have fallen like bombshells. But I note one remarkable fact: He has neither disciples, nor searching antagonists. There are many who adopt some of his conclusions, but no one takes up his doctrine as a system, preaching it, applying it, developing it. There are hundreds who write refutations, and thousands who denounce him with bitter and scornful contempt; but no one, not even Leibnitz himself, grapples with the system and overthrows it, or even shakes it. Fierce blows have often been aimed at it; but they have beaten the air, not touched the system. A recent Dutch antagonist, Van der Linde, has indicated several insurgent thinkers, who, in Holland, adopted the principles of the *Tractatus* with more or less fervor;* and the pietist, Edelmann, in Germany, may be named along with these. But neither in Holland, nor in Germany has there been a Spinozist, as there have been Cartesians, Kantists, and Hegelians, although German philosophy is in some sense saturated with Spinozism, and Hegel says, 'You are much of a Spinozist, or you have no standing whatever in philosophy.'†

This exceptional position has significance. It implies, I think, that the system contains within it some fundamental defect, which prevents even sympathetic students from taking it up into the framework of their daily thoughts, and adopting it as a philosophy. It also implies that the system is so rigorously constructed as only to be overturned by a lever applied to its foundations; and metaphysicians are indisposed to apply the lever *there*. This at any rate is how the case presents itself to me, read by the light of my own experience. On many grounds Spinoza attracted me. I studied him with eagerness and veneration, desirous to find a solution of all difficulties. But in vain. Conscious of a great debt to him, greater, indeed, than to any other metaphysician, I

* VAN DER LINDE: *Spinoza, seine Lehre und deren erste Nachwirkungen in Holland*. 1862, p. 134.

† HEGEL: *Gesch. der Philos.* iii. 369. 'Du hast entweder den Spinozismus oder gar keine Philosophie.'

cannot say that I was at any period a disciple. It was a long while before I knew why.

The fundamental difficulty of Spinozism is the impossibility of Metaphysics, or to speak more precisely, of Ontology. The false Method is the fountain of error. If the Method be allowed, the system must be accepted; if Ontology is a possible science, Spinozism is the most perfect form it has yet received. This will be strenuously denied by metaphysicians; nor can I pause here to argue so large a question. They will add, perhaps, that my denial of Ontology does not wholly meet the case, since other speculators besides Spinoza have employed the same Method, and, nevertheless, have gained disciples; if these disciples have shown alacrity in setting up as masters in their turn, and disowned their allegiance, they have for a time, at least, been disciples. Why has this success been denied to Spinoza? The answer is that it has been denied to him because his doctrine did not, as theirs did, admit of endless misapprehension and equivocation. Had their foundations been exposed, and their superstructures unsupported by flying buttresses, and unconcealed by moving clouds, their tottering architecture would have sheltered none whom Spinoza's visionary fabric left unhoused.

The fundamental mistake of the Metaphysical Method is that it attempts to explain the scheme of the visible from the invisible, deduces the knowable from the unknowable. In Physics we pass, by verified inductions, from the visible to the invisible, from the known to the unknown. The bulk of our facts relates to the invisible, but they are so intimately dependent on the visible, of which, indeed, they are simple deductions, that we feel the same certainty respecting them as respecting any visible fact; they are demonstrable because they are presentable to consciousness under the forms of the known. It is otherwise with Metaphysics, which proceeds on unverified deductions. The ground of knowledge there is placed beyond experience. The ideas of *Noumenon*, Cause, and unconditioned existence, are the postulates from which

the scheme of phenomena is developed. The constructions of the mind are regarded as the models after which Nature works. The external order is sought by analysis of the internal order.

Now there is one science which has a delusive resemblance to this *à priori* evolution of results from abstractions, and in which the process is thoroughly legitimate, and because legitimate effective. It is Mathematics. Spinoza, with a consistency peculiar to himself, has therefore given his system a geometrical form. If the fundamental assumption of Metaphysics be warranted, Spinoza is right. If rigorous deductions from clear ideas be all that is necessary to assure us of truth, the evolution of the concrete universe from a few definitions and axioms, is as valid as the evolution of mathematical results.

But there is this objection to geometrical metaphysics. Geometry is restricted to relations of magnitude. It deals with points, lines, and surfaces, which are capable of external verification; they are also unequivocal and unalterable:—under all varieties of conditions angles preserve their angular relations and their unalterable values. Having once defined a circle or an angle we may proceed in perfect confidence to draw out all the possible relations contained within those figures. Not so in Metaphysics. We have not there to unfold definitions, but to solve problems, and reach definitions by means of our solutions. We have not simple relations of magnitude to deal with, but complex relations of causality. The data are not simple and unequivocal, but complicated and obscure. We have to analyze these into their elements, and by unfolding the order of their arrangement unfold their causal nexus. We are no longer restricted to simple unchangeable relations of quantity, but have to take in the variable relations of quality. Our reliance on deduction is no longer justifiable; our definitions and axioms cease to be comprehensively true; and thus it is that Definitions which are guides in Mathematics are will-o'-wisps in Metaphysics.*

* On this point, see KANT: *Untersuchungen über die Deutlichkeit der Grundsätze der natürlichen Theologie und der Moral.*

It is enough if the definitions of Mathematics are clear, they have then all the adequacy they claim. We cannot reproach them with leaving relations of quality untouched; they only pretend to embrace relations of quantity. But the definitions of Metaphysics must not only be clear, they must be adequate, comprehensive, exhaustive, for they claim to disclose the reality in its completeness, and the world in its causality.

Are the postulates of Metaphysics clear? Two thousand years of impotence prove their obscurity. Are they adequate? They claim to be; but Spinoza has, implicitly, denied this claim by assigning infinite attributes to existence, yet of these infinite attributes recognising only two as knowable—Thought and Extension. This difficulty he nowhere resolves. Yet surely there is a manifest contradiction in first postulating an infinity of attributes as the constituents of existence, and then proceeding to give an adequate explanation of existence by means of only two out of the infinite attributes? The mathematician may not argue thus. 'Things have a great variety of aspects which together make up the activities of their nature; I can only tell you of their quantitative aspects, but from these you may recognize all their qualitative aspects. I can measure the angles of a salt, and only the angles; from these you may at once deduce its other properties, physical, chemical, and therapeutical. I can only measure the rapidity and sweep of the oscillations of ether; but from these you can deduce the thermal, optical, and chemical effects.' The absurdity would be glaring. The absurdity if less glaring is as great which pretends to deduce from two attributes the infinite results of infinite attributes; or—quitting Spinoza for the ordinary assumption of metaphysicians—to attempt from finite, relative knowledge a construction of the infinite and absolute.

M. Damiron, in a very able essay, denies that the geometrical method can be applied to Metaphysics, because our intelligence cannot form notions so clear and necessary respecting substance, cause, time, good and evil, as respect-

ing points, lines, and surfaces; and whenever such clear notions have been attempted it has only been by sacrificing something of the reality, by the consideration of one aspect to the exclusion of the other.* This is perfectly true if applied to metaphysicians in general; but is not wholly true as applied to Spinoza, whose notions of substance, cause, etc. are not less clear than his notions of lines and surfaces. Meanwhile let us ask, *why* can we not form notions of cause, substance, and the rest, equalling in certainty our notions of lines and surfaces? The answer to this question dooms Metaphysics to eternal uncertainty: It is because Geometry never quits the sphere of its quantitative relations that its axioms retain their necessary clearness, and its consequences their necessary truth. It begins with lines and surfaces, with lines and surfaces it ends; it is a purely formal and deductive science. Its truths, when objectively applied, include *no other elements* than those *originally* given; when from *ideal* lines and the relations of those lines we pass to *real* lines and relations, we are still strictly within the sphere of lines and their relations; and the mightiest geometry can tell us nothing whatever of any *other* property of substance; it is powerless before any relations except those of magnitudes. Although we find, as a matter of fact, that questions of quantity underlie questions of quality, so that mathematics thus becomes an organon of discovery, these results have to be sought in other ways, and have to be verified by other means. We have found that the rapidity and swing of oscillating media determine the differences in tone and colour. But no mathematician could have deduced a tone or a colour from the velocity and sweep of a vibration. Formal Logic does remain within the sphere of its original assumptions, and it rivals geometry in its exactness; but when Logic passes into Metaphysics, it unhappily starts from its subjective sphere, and passes to the objective, pretending to *include* in its circle far more than is given in the original subjective datum, pretending indeed to disclose the *whole nature* of Substance,

* DAMIRON: *Mémoire sur Spinoza*, p. 19.

Cause, Time, and Space, and not merely *certain relations among our ideas* of these. When, for example, Spinoza passes from his ideal distinction of cause and effect, as when he proves that God must act according to the laws of his own nature, yet without constraint, nothing determining him save his own perfection, it is evident that Spinoza believes the purely subjective definition which he has framed expresses the whole truth of objective reality; he pretends to *know* the nature of God, and to know it through the notions he has framed of cause and effect. To select another example, the fifth proposition, on which so much of Spinoza's system depends: 'It is impossible that there should be two or more Substances of the same nature, or of the same Attribute.' This is subjectively true: as true as a proposition in Euclid; that is to say, it contains no contradiction, it is perfectly coherent with the definitions of Substance and Attribute; but if we pass from *definition*, and look only at actual substances before us—say two minerals—we perceive the definition to be framed from ideas, and not founded on objective reality. The fact is that Substance, as he defines it, is altogether unknown to us; it is removed from all experience and all possible verification. The substances (existences) which we *can* know, do not accord with his proposition.

The mathematician deduces conclusions from abstractions, and these are found to correspond with objective fact to nearly the whole extent of what was originally assumed, namely the relations of magnitudes, and no further. The metaphysician deduces conclusions equally abstract, and it may be that some conclusions will apply to objective fact (as when it is said 'nothing can be and not be at the same moment') but the moment he speaks of Cause, Time, Space, and Substance, his ideas are necessarily indistinct, because he cannot know these as *things*; he can only frame inferences respecting them, and these inferences at every step need *verification*.

This the metaphysician will deny. He believes in the validity of Reason. He maintains the perfect competence of human intellect to know Cause, Time, Space, and Substance;

but he has not the same clear argument Spinoza had, on which to ground this belief. And here we are face to face with the radical assumption which constitutes the initial error and logical perfection of Spinoza's system. He holds and expressly teaches that the *subjective idea* is the actual image or complete expression of the *objective fact*. 'Hoc est, id quod in intellectu objectivè continetur debet necessario in naturâ dari.' The order and connection of ideas is precisely the order and connection of things. In the Scholium to Prop. VIII. we have seen him maintaining that the correct definition of a thing expresses the nature of the thing, and nothing but its nature; which is true in one sense; for unless it express the nature of the thing the definition must be incorrect; but false in another and more important sense; for every definition we can frame only expresses *our* conceptions of the nature of the thing: and thus we may define the nature of the inhabitants of the moon, and adhere to our definitions with the utmost logical rigour, yet all the while be utterly removed from any real knowledge of those inhabitants. The position is logically deducible from Spinoza's conception of the relation between Thought and Extension as the two Attributes of Substance; but it is a position which is emphatically contradicted by all sound Psychology. Nevertheless without it Metaphysics has no basis. Unless clear ideas are to be accepted as the truths of things, and unless every *idea*, which is distinctly conceived by the mind, has its *ideate*, or *object*—metaphysicians are without a fulcrum.

Having thus signalized the fundamental position of Spinoza's doctrine, it is there, if anywhere, that we shall be able to show his fundamental error. On the truth or falsehood of this one assumption must Spinozism stand or fall. Those who agree with us may escape Spinozism; but they escape it by denying the possibility of all Ontology.

This consideration, that the mind is not a passive mirror reflecting the nature of things, but the partial creator of its own forms—that in perception there is nothing but certain changes in the percipient—this consideration, we say, is the

destruction of the very basis of metaphysics, for it expressly teaches that the subjective idea is *not* the correlate of the objective fact; yet only upon the belief that our ideas are the perfect and adequate images of external things can metaphysical speculation rest. Misled by the nature of geometry which draws its truths from the mind as the spider draws the web from its bosom, Descartes assumed that metaphysical truths could be attained in the same way. Spinoza had read Bacon's denouncement of this *à priori* Method, though evidently unprepared to see the truth of the protest. It is curious to read his criticism of Bacon: he looks on it as that writer's great error, to have mistaken the knowledge of the first cause and origin of things. 'On the nature of mind, he says, Bacon speaks very confusedly; and while he proves nothing, judges much. For in the first place he supposes that the human intellect, besides the deceptions of the senses, is subject to the deceptions of its own nature, and that it conceives everything according to the analogies of its own nature, and not according to the analogies of the universe; so that it is like an unequal mirror to the rays of things, which mixes the conditions of its own nature with those of external things.'*

Spinoza's aberration is remarkable because he had also seen that in some sense the subjective was not the absolute expression of the objective; as is proved by his celebrated argument for the destruction of final causes, wherein he showed that *order* was a thing of the imagination, as were also right and wrong, useful and hurtful—these being merely such in relation to *us*. Still more striking is his anticipation of Kant in this passage:—'Ex quibus clarè videre est, mensuram, tempus, et numerum, nihil esse præter cogitandi, seu potiùs imaginandi modos;' which should have led him to suspect that the same law of mental forms was also applicable to all other subjects.

* 'Nam primò supponit quod intellectus humanus, præter fallaciam sensuum, suâ solâ naturâ fallitur, omniaque fingit ex analogiâ suæ nature, et non ex analogiâ universi; adeò ut sit instar speculi inæqualis ad radias rerum, qui suam naturam nature rerum immiscet.'—*Epist. ii. Opera Posthuma*, p. 398.

Spinoza not only proceeds on the supposition that clear ideas are objective truths, but that they carry with them a supreme certainty; they are the formal essences of the objects and require no verification. Hence his conclusion that since every idea must be adequate to the formal essence of its object, being in short the obverse of it, the mind must, in order to follow Nature's example, deduce all its ideas from that one which reproduces the origin and source of nature, so that it may be also the source of all other ideas.*

Clear ideas are distinguished from confused ideas: the second are products of fortuitous bodily movement, the first of pure reason: 'ex pura mente, et non ex fortuitis motibus corporis factæ sint.' And to reduce all these clear ideas under one, we must so arrange them that our mind objectively reproduces that which is formally objective in nature.

Yet he warns us against mistaking abstractions for realities, and Bacon would have applauded what is said about guarding ourselves against confounding what is only in our own minds with what is in things: 'et magnopere cavebimus ne misceamus ea quæ tantum sunt in intellectu cum iis quæ sunt in re.' This is, indeed, the danger of philosophy. We avoid it by Verification which proves the correspondence between object and idea.†

Also in respect of Definitions his warning is raised. 'A definition should explain the intimate essence of a thing, and we must be on our guard lest we substitute a particular property for this essence. If, for example, a circle be defined as a figure in which all the lines from the centre to the circumference are equal, every one sees that this definition in no way explains the essence of a circle but only one of its properties: and although, as I said, this matters little in reference to figures and other *entia rationis*, it is important in

* 'Porro ex hoc ultimo, quod diximus, scilicet quod idea omnino cum sua essentia formali debeat convenire, patet iterum, ex eo quod, ut mens nostra omnino referat nature exemplar, debeat omnes suas ideas producere ab ea quæ refert originem et fontem totius nature ut ipsa etiam sit fons ceterarum idearum.'—*De Intell. Emend.* 42.

† On this point compare our *Prolegomena*, ii. § 15.

reference to real and physical things, because their properties cannot be understood so long as their essence is unknown. If we leave essences out of sight, the necessary concatenation of ideas which should reproduce the concatenation of objects is destroyed.*

In arranging our perceptions systematically, he says, we must ascertain first if there is some being which is the cause of all things, and what that being is, so that its objective essence will be also the cause of our ideas, and thus our minds reproduce the order of nature, its essence and union. And this course he follows in the construction of his system. It is the purely ontological process. Had he approached from the psychological side, and first thoroughly investigated the conditions and limits of human knowledge, he would have seen the initial mistake of his Method. Indeed an extension of his own principles might have opened to him a vista of his error. He laid down the canons of truth and error. All inadequate ideas he says are erroneous, and only these. The mind has a variety of such ideas—inadequate, confused, truncated—the origin of which is vague experience, imagination, opinion, as distinguished from reason. The ideas of reason are clear and adequate. It may startle the reader to find among the inadequate confused ideas specified by Spinoza, some which are the peculiar objects of metaphysics, namely Being, Thing, Freedom, and general ideas such as Man, Animal, &c. These are nothing but abstractions arising from the infirmity of thought. We cannot at once embrace many elements of a conception. We cannot hold many particulars steadily and clearly before the mind. Drooping under their weight, and dazzled by their multiplicity, the mind slips away, carrying with it (by abstraction) some one confused general character, in which the particular details are more or less merged. Imagining objects in extreme confusion we resume them under one predicate such as Being, Thing, Genus. Thus all images of particular men or particular horses are confusedly blended in the abstraction

* *De Intell. Emend.* 95.

Man or Horse. Thus transcendental ideas are formed. They are *notiones universales*, and as such are necessarily obscure, inadequate, ergo erroneous. What wonder then that these notions have been fruitful of controversy, since each man represents the object by that sign which most interests him, and thus the variety of ideas calling themselves universal has been proportionate to the variety of interests. Freedom is an example. It is founded on the supposition of some general Will, or absolute faculty of determining this or that act, i.e. an abstraction from particular acts of volition, as Man is from individual men. The real will is desire, and every act of desire has its special cause, which it necessarily follows as effect. If we abstract from all these particular acts a naked undetermined Will, a Will that is uncaused, it is something removed from reality, '*ens imaginationis*,' having no more objective existence than the *lapidity* of stone, the *aureity* of gold, the *animality* of lions and tigers.

If we reject as abstractions, fictions of our infirm thought, such notions as those of *ens*, *aliquid*, freedom, final cause, &c., how can Spinoza ask us to accept his notions of God, Cause, and Substance, as if these also were not abstractions similarly constructed? Are they clearer? Are they more real? Yes, he replies. These are marked out as *notiones communes*, and their validity is seen in their being common to all experience. The *notio communis* is an expression of real existence, because it expresses that which is found common to every individual thing. Our knowledge of things, indeed, is partial, and in so far inadequate; but, if throughout this partial knowledge there runs one common character, we may be sure that this common character expresses a common truth.* There are notions common to all minds; these must be true.

The objection will certainly arise that what are called *notiones universales*—the conceptions Thing, Something, Freedom, Virtue, Animal, Man, &c.—are quite as common to all minds as the *notiones communes*, God, Substance, and Cause.

* *Ethica*, ii. prop. xxxvii.—xxxviii.

Why then is the one class to be rejected as vague error, and the other accepted as irresistible truth? Spinoza's answer would be that the criterion of truth is clearness and distinctness. A geometrical fallacy. 'He who has a true idea not only knows that he has it but is unable to doubt its truth.' A psychological fallacy. Let us follow his demonstration of it:

'A true idea in us is that which is adequate in God, in so far as he is manifested by the nature of the human mind (by coroll. prop. xi. part ii.). Let us, therefore, suppose that there is in God, so far as he is manifested by the human mind, an adequate idea A. There must be also in God the idea of this idea, which is related to God in the same way as idea A (acc. to prop. xx. the demonstration of which is universal). But the idea A is supposed to belong to God in so far as he is manifested by the human mind; therefore, also the idea of this idea must belong to God in the same way, i. e. this adequate idea of the idea A will be in the same mind which has the adequate idea A; and thus he who has an adequate idea or (by prop. xxxiv. part ii.) who truly knows a thing, must at the same time have an adequate idea or true cognition of his cognition i. e. (as is self evident) he must at the same time have certitude: Q. E. D.

Schol. In scholium prop. xxi. I have explained what is the idea of an idea. But it is to be noted that the preceding proposition is sufficiently evident by itself. For no one who has a true idea is ignorant that a true idea involves the highest certitude. To have a true idea signifies nothing else than to know a thing perfectly; nor, indeed, can any one doubt this unless he supposes an idea to be a mute image, like a picture, and not a mode of thought. And I ask who can *know* that he understands a thing unless he first understands it, i. e. who can *know* that he is certain of a thing unless he be first certain of it? Further, what can be clearer and more certain than a true idea, so as to be a criterion of its truth? As light manifests both itself and darkness, so truth is the criterion of itself and of falsehood. And hereby I believe myself to have answered the following objections:

namely, if a true idea is distinguished from a false idea only in so far as it is said to agree with its object, a true idea has no more reality or perfection than a false idea (since they are distinguished solely by an extrinsic mark), and consequently the man who has true ideas would have no more of reality or perfection than he who has false ideas. Further, whence comes it that men have false ideas? And lastly, whence can one certainly know that he has ideas which agree with their objects? . . . Add to this that our mind, in so far as it truly perceives things, is a part of the infinite intellect of God, and thus it is as necessary that clear and distinct ideas of mind are true as that the ideas of God are true.'

A metaphysician may be satisfied with the criterion of inward conviction, and the character of clearness. Positive philosophers may be permitted to decline such a criterion. They cannot accept subjective distinctions as equivalent to objective discrimination: logical analysis as equivalent to physical analysis; and *une manière de voir* as a method of search. They deny the validity of a method which begins by assuming the conclusions at which it is to arrive. If we can ever solve the problems of the invisible and unknown, we must be led up to them through the avenues of the visible and known. Physics must form the prolegomena to Metaphysics. Psychology will teach us to relinquish all vain efforts to transcend our faculties, and no longer waste valuable time in ontological research.

I must not pursue this topic. Enough has been said, perhaps, to indicate what I consider the strength and the weakness of Spinozism. Its strength lies in its consistency. If clear thoughts are adequate and accurate representations of things, if Thought itself is the correlate of Extension, Mind the obverse of Matter, coextensive and cointensive, and human intellect a mode of God's infinite attribute; then, indeed, all the movements of matter will be paralleled by movements of mind, the external order will be identical with the internal order, and whatever we find in the intellect may be concluded to exist in the external world; subjective

logic being, as Hegel boldly affirms, identical with objective reality. That is the foundation of Spinozism. We must ask for no proof of so momentous a position. It is antecedent to all proof. To deny it is to deny philosophy. 'With Method,' Spinoza says,* 'it is as with other instruments. Forging iron is only possible when we have a hammer; but to have the hammer we must forge it, which presupposes another instrument, and so on *ad infinitum*. It would be vain to attempt to prove by such reasoning that man had no power to forge iron. In the beginning men used the instruments furnished by nature and with them made a few imperfect things, then other things better and with more ease, and thus gradually perfecting both their works and their instruments they have come to perform wonderful things with little difficulty. In the same way the human understanding in virtue of the power which is in it fashions its intellectual instruments, by means of which it acquires new forces, and so on gradually fortifying itself it advances till supreme wisdom is attained. There exists in us a true idea which resembles an instrument, and which while it is comprehended by the mind, enables us to comprehend the difference which exists between the idea itself and every other perception.'

If no proof is offered of the fundamental position, rigorous proof is offered of all that is evolved from it. Once admit that all clear and distinct ideas are necessarily adequate expressions of objects, and the mathematical deduction proceeds undisturbed. One might indeed advance another system on a similar basis, having equal validity and opposite conclusions. For example, Spinoza generates Motion out of Extension. It would be easier to generate Extension out of Motion; or if not easier, the mere possibility of doing it is enough for my purpose. Again, Spinoza makes Thought the infinite attribute of Substance; thereby giving a soul both to animate and inanimate objects. But with equal or greater validity Thought may be conceived as no general attribute at all, only a special mode of the general attri-

* *De Intellect. Emend.* 30.

bute of Force. One idea is as clear as the other; which is true? It is because Metaphysics is without a criterion that systems spring up like mushrooms and like mushrooms disappear. The contest is interminable, because no conclusions are verifiable.

In conclusion we may point to Spinozism as the legitimate result of that Subjective Method which Descartes, in spite of his insurgence against Scholasticism, had restored to its ancient place. In vain were metaphysical entities and metaphysical theories banished; their parent, the metaphysical Method, was retained. That process of deduction which, as in Mathematics, from a few axioms constructed a whole universe, could only have been legitimised by an initial verification of the principles and a successive verification of the conclusions. This was not attempted, and could not have been effected, since the premisses and the conclusions embrace objects inaccessible to human powers.

There are other points which might profitably be discussed did our limits admit of it; but enough has been said to show the main direction of Spinoza's speculations and their historical position, as the development of that Method which Descartes had systematized. The application of the Method to cosmical phenomena in the hands of Descartes and his followers, rapidly disclosed its essential unfitness for research; the application to ontological problems, in the hands of Spinoza, led to results so startling and so abhorrent to the general mind, that it called attention to the grounds upon which such conclusions could be based. As I said before there were no Spinozists to carry on the work of their master. The followers of Descartes were quickly silenced by the followers of Newton. Only in Metaphysics could they find a field, and there to this day Descartes is regarded as a master. In the same region Spinoza is also regarded as a master: no one avowedly adopts Spinozism, but German Ontology is thoroughly penetrated by it.*

* The works on Spinoza are abundant. The best expositions of his doctrine I have seen are in KUNO FISCHER: *Gesch. der neuern Philos.*, and SIGWART: *Der Spinozismus historisch und philos. erläutert*.

CHAPTER II.

THE FIRST CRISIS IN MODERN PHILOSOPHY.

SPINOZA, by the development of the germs sent forth by Descartes, produced a crisis. He startled men by the conclusions to which he showed that their philosophical premisses irresistibly led; and thus forced them into the dilemma either of rejecting the premisses, or rejecting the validity of Philosophy as then conceived.

If the premisses are correct, and every clear, distinct idea is necessarily true, subjective logic is a key to the mystery of the objective world; the internal order is identical with the external order; and Spinozism is the only creed.

If the premisses are not correct, if the voice of Consciousness is not necessarily the voice of truth, the subjective not always the harmonious correlate of the objective, Metaphysical Philosophy is impotent, because it has its basis in this certitude of Consciousness.

Spinozism or Scepticism? There seemed no third alternative. Nor was there a third alternative, so long as Philosophy persisted in its ontological and absolute claims—persisted in the metaphysical Method, in the search for truths lying beyond the sphere of relativity. A new conception of Philosophy was needed to restore the shattered confidence of philosophers.

This new conception was then slowly growing into the distinctness it has of late assumed. It involved a complete change in the point of view. The relativity of all knowledge was its primary canon. With this necessarily came a complete exclusion of ontological research. The nature and limits of Knowledge became the most urgent topics. Before

deciding upon any question relating to Creation, Immortality, or Cause, men saw themselves compelled to decide upon the competence of human faculty to acquire any knowledge whatever of such subjects. If this inquiry should result in disclosing a native incompetence, there would be an end to all disputes on topics thus removed from rational research.

The crisis, therefore, turns upon this fundamental dispute: Can the human mind transcend the sphere of relative knowledge, and, passing from Consciousness to Causes, explore the nature of things *per se*?

The first decomposition of this great question is into the psychological question of the origin of ideas: *Have we or have we not any ideas which are antecedent to, and independent of, Experience?*

The recognition of this question as the primary one, constitutes a new era in History. Several writers have remarked the enormous predominance of psychological inquiries from Spinoza to Fichte; but the reason of this turn in the direction of Philosophy has not, I think, been recognised. The fact is patent; the connection of the predominance of Psychology with the necessary decrease of Ontology required explanation; the more so as Psychology occupied but little attention in the ancient and mediæval schools. I believe that the importance acquired by Psychology, especially in its treatment of the origin and scope of human faculty, was the natural result of the same objective tendency which had given prominence to the Inductive Method. A necessity had arisen for a new course of investigation. The hopeless failures of so many generations suggested that the seekers had begun their search at the wrong end; and that before any issue could be found, a complete revision of the means of search was indispensable. The limits and conditions of the inquiring mind had to be ascertained.

THIRD EPOCH.

Philosophy pauses to ascertain the scope and limits of the human mind.

CHAPTER I.

HOBBS.

PERHAPS no writer except Spinoza has ever been so uniformly depreciated as Hobbes. From his first appearance until the present day his name has been a bye-word of contempt with the majority of writers; and even by those who have been liberal enough to acknowledge merit in an adversary, he has been treated as a dangerous and shallow thinker. The first person who saw his importance as a political thinker, and had the courage to proclaim it, was James Mill. As long as political and social theories continue to be judged of by their *supposed* consequences, so long will Hobbes be denied a fair hearing. He has roused the *odium theologicum*. It will be long ere that will be appeased.

Faults he had, unquestionably; short-comings, incomplete views; and—as all error is dangerous in proportion to its plausibility—we will say that he was guilty of dangerous errors. Let the faults be noted, but not overstrained; let the short-comings and incomplete views be enlarged and corrected; the errors calmly examined and refuted. We shall be gainers by it; but by inconsiderate contempt, or by vilifying, no good result can be obtained. Impartial minds will rank Hobbes amongst the greatest writers England has produced. He is profound, and he is clear; weighty, strong, and sparkling. His style, as mere style, is in its way as fine as any-

thing in English: it has the clearness as well as the solidity and brilliancy of crystal. Nor is the matter unworthy of the form. It is original, in the sense of having been passed through the alembic of his own brain, even when formerly the property of others. Although little of it would now appear novel, it was novel when he produced it. Haughty, dogmatic, overbearing in manner, he yet loved Truth, and never hesitated to proclaim it. 'Harm I can do none,' he says, in the opening of the *Leviathan*, 'though I err no less than they (i.e. previous writers), for I shall leave men but as they are, in doubt and dispute; but intending not to take any principle upon *trust*, but only to put men in mind of what *they know already*, or may know by their experience, I hope to err less; and when I do, it must proceed from *too hasty concluding*, which I will endeavour as much as I can to avoid.'*

He proclaims that Psychology is a science of observation; that if we would understand the conditions and operations of our minds, we must patiently look inwards and see what passes there. All the reasoning and subtle disputation in the world will not advance us one step, unless we first get a firm basis on fact. 'Man,' he says elsewhere, with his usual causticity, 'has the exclusive privilege of forming general theorems. But this privilege is alloyed by another, that is, by the privilege of absurdity, to which no living creature is subject but man only. And of men those are of all most subject to it, that profess Philosophy.' And the cause of this large endowment of the privilege to philosophers we may read in another passage, where he attributes the difficulty men have in receiving Truth, to their minds being prepossessed by false opinions—they having *prejudged* the question. The passage is as follows:—'When men have once acquiesced in untrue opinions, and registered them as authenticated records in their minds, it is no less impossible to speak intelligibly to such men than to write legibly on a paper already scribbled over.'

Hobbes's position in the History of Philosophy is easily

* *Works*, edited by Sir W. MOLESWORTH, iv. 1.

assigned. On the question of the origin of our knowledge he takes a decided stand upon Experience: he is the precursor of modern sensationalists:—

‘Concerning the thoughts of man I will consider them first singly, and afterwards in a train or dependence upon one another. Singly they are every one a *representation* or *appearance* of some quality or other accident of a body without us, which is commonly called an *object*. Which object worketh on the eyes, ears, and other parts of a man’s body; and by diversity of working, produceth diversity of appearances.

‘The original of them all is that which we call *Sense*, for there is no conception in a man’s mind which hath not at first, totally or by parts, been begotten upon the organs of sense. The rest are derived from that original.’*

Here is stated, in the broadest manner, the principle of sensationalism. It is in direct antagonism to the doctrine of Descartes that there are innate ideas; in direct antagonism to the old doctrine of the spirituality of Mind. Theoretically this principle may be insignificant; historically it is important.

Hobbes’s language is plain enough, but we will still further quote from him, to obviate any doubt as to his meaning.

‘According to the two principal parts of man, I divide his faculties into two sorts—faculties of the *body*, and faculties of the *mind*.

‘Since the minute and distinct anatomy of the powers of the body is nothing necessary to the present purpose, I will only sum them up in these three heads,—power *nutritive*, power *generative*, and power *motive*.

‘Of the powers of the mind there be two sorts—*cognitive*, *imaginative*, or *conceptive* and *motive*.

‘For the understanding of what I mean by the power *cognitive*, we must remember and acknowledge that there be in our minds continually certain *images* or conceptions of the things without us. This *imagery* and *representation* of

* *Leviathan*, ch. i. In the following exposition we shall sometimes cite from the *Leviathan* and sometimes from the *Human Nature*.

the qualities of the things without, is that which we call our *conception*, *imagination*, *ideas*, *notice*, or knowledge of them; and the *faculty*, or power by which we are capable of such knowledge, is that I here call *cognitive power*, or *conceptive*, the power of knowing or conceiving.’

The mind is thus wholly constructed out of sense. Nor must we be deceived by the words faculty and power, as if they meant any activity of the mind—as if they implied that the mind *co-operated* with sense. The last sentence of the foregoing passage is sufficient to clear up this point. He elsewhere says:—‘All the qualities called *sensible* are, in the object that causeth them, but so many several *motions* of the matter by which it presseth on our organs diversely. *Neither in us that are pressed are they anything else but divers motions; for motion produceth nothing but motion.*’

Hobbes, therefore, and not Locke, is the precursor of that school of Psychology which flourished in the eighteenth century (principally in France), and which made every operation of the mind proceed out of transformed sensations; which ended, logically enough, in saying that to *think* is to *feel*—*penser c’est sentir*.

It is to Hobbes that the merit is due of a discovery which, though so familiar to us now as to appear self-evident, was yet in truth a most important discovery, and was adopted by Descartes in his *Meditations**—it is that our sensations do not correspond with any external qualities; that what are called sensible qualities are nothing but modifications of the sentient being:—

‘Because the image in vision, consisting of colour and shape, is the knowledge we have of the qualities of the object of that sense; it is no hard matter for a man to fall into this opinion that the same colour and shape are the very qualities themselves; and for the same cause that sound and noise are the qualities of the bell or of the air. And this

* DESCARTES may possibly have discovered it for himself; but the priority of publication is at any rate due to HOBBES—a fact first noticed, we believe, by Mr. HALLAM: *Literature of Europe*, iii. 271.

opinion hath been so long received that the contrary must needs appear a great paradox; and yet the introduction of *species visible* and *intelligible* (which is necessary for the maintenance of that opinion) passing to and fro from the object is worse than any paradox, as being a plain impossibility. I shall therefore endeavour to make plain these points:

‘That the subject wherein colour and image are inherent, is not the object or thing seen.

‘That there is nothing without us (really) which we call an image or colour.

‘That the said image or colour is but an apparition unto us of *the motion, agitation, or alteration, which the object worketh in the brain*, or spirits, or some internal substance of the head.

‘That as in vision, so also in conceptions that arise from the other senses, the subject of their inference is not the object but the sentient.’

This important principle, which Carneades among the ancients alone seems to have suspected, Hobbes has very clearly and conclusively illustrated.

Sense furnishes us with conceptions; but as there are other operations of the mind besides the conceptive, it remains to be seen how sense can also be the original of them.

And first, of *Imagination*. Mr. Hallam has noticed the acuteness and originality which often characterise Hobbes’s remarks; and he instances the opening of the chapter on Imagination in the *Leviathan*. It is worth quoting:—‘That when a thing lies still, unless somewhat else stir it, it will lie still for ever, is a truth no one doubts of. But that when a thing is in motion it will eternally be in motion, unless somewhat else stay it, though the reason be the same, namely that nothing can change itself, is not so easily assented to. For men measure not only other men but all other things by themselves; and because they find themselves subject after motion to pain and lassitude, think everything else grows weary of motion and seeks repose of its own accord; little considering whether it be not some

other motion wherein that desire of rest, they find in themselves, consisteth.’ Imagination Hobbes defines as a ‘conception remaining and by little and little decaying from and after the act of sense.’ . . . ‘Imagination, therefore, is but *decaying sense*.’ The reader must not here understand by imagination anything more than the retaining of an *image* of the object, after the object is removed. It is the term used by Hobbes to express what James Mill happily called *Ideation*. Sense, Sensation; ideas, Ideation. Hobbes says, sense, Sensation; images, Imagination.

The materialism of Hobbes does not consist merely in his language (as is the case with some philosophers; Locke, for instance); it lies at the very root of his theory. Thus, he says, we have sensations and we have images—ideas. Whence those images? ‘When a body is once in motion it moveth, unless something hinder it, eternally; and whatsoever hindereth it, cannot in an instant, but in time and by degrees quite extinguish it; and as we see in the water, though the wind cease, the waves give not over rolling for a long time after: so also it happeneth in that *motion* which is made in the internal parts of man; then, when he sees, dreams, &c. For after the object is removed, or the eye shut, we still retain an image of the thing seen, though more obscure than when we see it. . . . The decay of sense in men waking is not the decay of the motion made in sense, but an obscuring of it, in such manner as the light of the sun obscureth the light of the stars; which stars do no less exercise their virtue, by which they are visible, in the day than in the night. But because amongst many strokes which our eyes, ears, and other organs receive from external bodies, the predominant only is sensible; therefore the light of the sun being predominant, we are not affected with the action of the stars.’ This illustration is very happy; but it only serves to bring out into stronger relief the materialism. He has told us what Imagination is; let us now learn what is Memory. ‘This decaying sense, when we would express the thing itself, I mean *fancy* itself, we call *imagination*, as

I have said before; but when we would express the decay, and signify that the sense is fading, old, and past, it is called *memory*. So that imagination and memory are but one thing, which for divers considerations hath divers names.' Mr. Hallam objects to this, and says that it is very evident that imagination and memory are distinguished by something more than their names. Truly, by us; but not by Hobbes: he evidently uses the word imagination in a more generical sense than we use it: he means by it Ideation. Thus he calls dreams 'the imagination of them that sleep.' It is that state of the mind which remains when the objects which agitated it by sensations are removed: the mind is then not so agitated, but neither is it calm; and he compares that state to the gentle rolling of the waves after the wind hath ceased.

Let this be distinctly borne in mind: Hobbes sees nothing in the intellect but what was previously in the sense. Sensations, and the traces which they leave (i. e. images), form the simple elements of all knowledge; the various commixtures of these elements form the various intellectual faculties. Open the third chapter of the *Leviathan*. In it he propounded, as something quite simple and obvious, the very important law of association of ideas.* He states it with great clearness and thorough mastery, though he evidently was quite unaware of its extensive application.

'When a man thinketh,' he says, 'on anything whatsoever, his next thought after is not altogether so casual as it seems to be. Not every thought to every thought succeeds indifferently. But as we have no imagination whereof we have not formerly had sense in whole or in parts, so we have no transition from one imagination to another whereof we never had the like before in our senses. The reason whereof is this: all fancies (i. e. images) are *motions within us, relicts of those made in sense*; and those motions that immediately succeed one another in the sense continue also together after the sense; insomuch as the former coming again to take place

* See Sir W. HAMILTON: *Dissertation* affixed to *Reid's Works*, p. 398, for a history of this law of association.

and be predominant, the latter followeth by coherence of the matter moved, in such manner as water upon a plain table is drawn which way any one part of it is guided by the finger.'

The materialism here is distinct enough. He continues, in excellent style:—'This train of thoughts, or mental discourse, is of two sorts. The first is unguided, without design, and inconstant, wherein there is no passionate thought to govern and direct those that follow to itself, as the end and scope of some desire or other passion; in which case the thoughts are said to wander, and seem impertinent one to another as in a dream. Such are commonly the thoughts of men that are not only without company, but also without care of anything; though even then their thoughts are as busy as at other times, but without harmony; as the sound which a lute out of tune would yield to any man; or in tune, to one that could not play. And yet in this wild ranging of the mind, a man may oftentimes perceive the way of it, and the dependence of one thought upon another. For in a discourse of our present civil war, what would seem more impertinent than to ask, as one did, what was the value of a Roman penny? Yet the coherence to me was manifest enough. For the thought of the war introduced the thought of delivering up the King to his enemies; the thought of that brought in the thought of the delivering up of Christ; and that again the thought of the thirty pence, which was the price of that treason; and thence easily followed that malicious question, and all this in a moment of time; for thought is quick.'

'For thought is quick.' This is the simple pregnant comment, justly deemed sufficient. The plain direct remark with which Hobbes concludes the above passage would, in the hands of many moderns, have run somewhat thus:—'How wonderful is thought! how mighty! how mysterious! In its lightning speed it traverses all space, and makes the past present!' Hobbes, with a few simple direct words, produces a greater impression than would all the swelling pomp of a passage bristling with notes of exclamation. This is the secret of his style. It is also the characteristic

of his speculations. Whatever faults they may have, they have no vagueness, no pretended profundity. As much of the truth as he has clearly seen he clearly exhibits: what he has not seen he does not pretend to see.

One important deduction from his principles he has drawn: 'Whatsoever we imagine is *finite*. Therefore there is no idea, no conception of anything we call *infinite*. No man can have in his mind an image of infinite magnitude, nor conceive infinite swiftness, infinite time, or infinite power. When we say that anything is infinite, we signify only that we are not able to conceive the ends and bounds of the thing named, having no conception of the thing, but of our own inability. And therefore the name of God is used not to make us conceive him, for he is incomprehensible, and his greatness and power are inconceivable, but that we may honour him. Also because whatsoever we conceive has been perceived first by sense, either all at once or by parts, *a man can have no thought representing anything not subject to Sense.*'

On Hobbes's principles this is irresistible. He assumes that all our *thoughts* must be *images*. So far is this from being true, that not even all our *sensations* are capable of forming images. What images are given by the sensations of heat or cold, of music, or of taste?

Every man's consciousness will assure him that thoughts are not always images. It will also assure him that he has the idea, notion, conception, figment (or whatever name he may give the thought) of Infinity. If he attempts to form an image of it, that image will of course be finite: it would not otherwise be an image. But he can think of it; he can reason of it. It is a *thought*. It is in his mind; though how it got there may be a question which he is not in a condition to answer.

We insist upon Hobbes's materialism, the better to prepare the reader for a correct appreciation of Locke. Hobbes, in the sixth chapter of his *Human Nature*, has very carefully defined what he means by knowledge. 'There is a story somewhere,' he says, 'of one that pretends to have been miraculously cured of blindness, wherewith he was born, by

St. Alban or other saints, at the town of St. Alban's; and that the Duke of Gloucester being there, to be satisfied of the truth of the miracle, asked the man, What colour is this? who, by answering it was green, discovered himself, and was punished for a counterfeit: for though by his sight newly received he might distinguish between green and red and all other colours, as well as any that should interrogate him, yet he could not possibly know at first sight which of them was called green, or red, or by any other name:

'By this we may understand there be *two kinds* of knowledge, whereof the one is nothing else but *sense*, or knowledge *original*, and *remembrance* of the same; the other is called *science*, or knowledge of the *truth, of propositions*, and how things are called, and is derived from *understanding*. Both of these sorts are but *experience*; the former being the experience of the effects of things that work upon us from *without*; and the latter experience men have from the proper use of *names* in language: and all experience being, as I have said, but remembrance, all knowledge is remembrance.'

The only ambiguity possible in the above passage is that which might arise from the use of the word *understanding*. This he elsewhere defines as follows:—

'When a man upon the hearing of any speech hath those thoughts which the words of that speech in their connection were ordained and constituted to signify, then he is said to understand it; *understanding* being nothing else but conception formed by speech.'

We must content ourselves with merely alluding to his admirable observations on language, and with quoting, for the hundredth time, his weighty aphorism, 'Words are wise men's counters; they do but reckon by them; but they are the money of fools.'

No attempt is here made to do full justice to Hobbes; no notice can be taken of the speculations which made him famous. Our object has been fulfilled if we have made clear to the reader the position Hobbes occupies in modern psychological speculation.

CHAPTER II.

LOCKE.

§ I. LIFE OF LOCKE.

JOHN LOCKE, one of the wisest of Englishmen, was born at Wrington, in Somersetshire, on August 29, 1632. Little is known of his family, except that his father had served in the parliamentary wars: a fact not without significance in connection with the steady love of liberty manifested by the son.

His education began at Westminster, where he stayed till he was nineteen or twenty. He was then sent to Oxford. That University was distinguished then, as it has ever been, by its attachment to whatever is old: the Past is its model; the Past has its affection. That there is much good in this veneration for the Past, few will gainsay. Nevertheless, a University which piqued itself on being behind the age, was scarcely the fit place for an original thinker. Locke was ill at ease. The Philosophy upheld there was Scholasticism. On such food a mind like his could not nourish itself. Like his great predecessor Bacon, he imbibed a profound contempt for the University studies, and in after-life regretted that so much of his time should have been wasted on such profitless pursuits. So deeply convinced was he of the vicious method of college education, that he ran into the other extreme, and thought self-education the best. It is true that all great men have been mainly self-taught; all that is most valuable a man must learn for himself, must work out for himself. Locke assumes that all men *will* educate themselves if left to themselves. The fact is, the majority have to be edu-

cated by force. For those who, if left to themselves, would never educate themselves, colleges and schools are indispensable.

Locke's notion of an educated man is very characteristic of him. Writing to Lord Peterborough, he says, 'Your Lordship would have your son's tutor a thorough scholar, and I think it not much matter whether he be any scholar or no: if he but understand Latin well and have a general scheme of the sciences, I think that enough. But I would have him well-bred and well-tempered.'

Disgusted with the disputes which usurped the title of Philosophy, Locke principally devoted himself to Medicine while at Oxford. His proficiency is attested by two very different persons, and in two very different ways. Dr. Sydenham, in the Dedication of his *Observations on the History and Cure of Acute Diseases*, boasts of the approbation bestowed on his Method by Mr. John Locke, 'who examined it to the bottom; and who, if we consider his genius and penetrating and exact judgment, has scarce any superior, and few equals now living.' The second testimony is that afforded by Lord Shaftesbury, when Locke first met him. The Earl was suffering from an abscess in the chest. No one could discover the nature of his disorder. Locke at once divined it. The Earl followed his advice, submitted to an operation, and was saved. A close intimacy sprang up between them. Locke accompanied him to London, and resided principally in his house.

His attention was thus turned to politics. His visits to Holland delighted him. 'The blessings which the people there enjoyed under a government peculiarly favourable to civil and religious liberty, amply compensated, in his view, for what their uninviting territory wanted in scenery and climate.*' He also visited France and Germany, making the acquaintance of several distinguished men.

In 1670 he planned his *Essay concerning Human Understanding*. This he did not complete till 1687. In 1675 the delicate state of his health obliged him to travel, and he

* DUGALD STEWART.

repaired to the South of France, where he met Lord Pembroke. To him the *Essay* is dedicated. He returned in 1679, and resumed his studies at Oxford. But his friendship for Shaftesbury, and the liberal opinions he was known to hold, drew upon him the displeasure of the Court. He was deprived of his studentship by a very arbitrary act.* Nor did persecution stop there. He was soon forced to quit England, and find refuge at the Hague. There also the anger of the king pursued him, and he was obliged to retreat further into Holland. It was there he published his celebrated *Letter on Toleration*.

He did not return to England till after the Revolution. Then there was security and welcome. He was pressed to accept a high diplomatic office in Germany, but the state of his health prevented him. In 1690 the first edition of his *Essay* appeared. He had indeed already (1688) published an abridgment of it in Leclerc's *Bibliothèque Universelle*. The success of this *Essay* was immense; and Warburton's assertion to the contrary falls to the ground on the mere statement of the number of editions which the work rapidly went through. Six editions within fourteen years,† and in times when books sold more slowly than they sell now, is evidence enough.

The publication of his *Essay* roused great opposition. He soon got involved in the discussions with Stillingfleet, Bishop of Worcester. He was soon after engaged in the political discussions of the day, and published his *Treatise on Government*. It was about this time that he became acquainted with Sir Isaac Newton; and a portion of their very interesting correspondence has been given by Lord King in his *Life of Locke*.

* MACAULAY: *History of England*, i. 545-6.

† The writer of the article *Locke*, in the *Ency. Brit.*, says that the fourth edition appeared in 1700. VICTOR COUSIN repeats the statement, and adds that a fifth edition was preparing when death overtook the author; this fifth edition appearing in 1705. We know not on what authority these writers speak; but that they are in error may be seen by turning to Locke's *Epistle to the Reader*, the last paragraph of which announces that the edition then issued by Locke himself is the sixth.

Locke's health, though always delicate, had not been disturbed by any imprudences, so that he reached the age of seventy-two—a good ripe age for one who had studied and thought. He expired in the arms of his friend, Lady Masham, on October 28, 1704.

§ II. ON THE SPIRIT OF LOCKE'S WRITINGS.

It has for many years been the fashion to decry Locke. Indirect sneers at his 'superficiality' abound in the writings of those who, because their thought is so muddy that they cannot see its shallow bottom, fancy they are profound. Locke's 'materialism' is also a favourite subject of condolence with these writers; and they assert that his principles 'lead to atheism.'

Another mode of undervaluing Locke is to assert that he only borrowed and popularised the ideas originated by Hobbes. The late Mr. Hazlitt—an acute thinker, and a metaphysician, but a wilful reckless writer—deliberately asserted that Locke owed everything to Hobbes. Dr. Whewell repeats the charge, though in a more qualified manner. He says, 'Hobbes had already promulgated the main doctrines, which Locke afterwards urged, on the subject of the origin and nature of our knowledge.'

Again, 'Locke owed his authority mainly to the intellectual circumstances of the time. Although a writer of great merit, he by no means possesses such metaphysical acuteness, or such philosophical largeness of view, or such a charm of writing, as to give him the high place he has held in the literature of Europe.'

That Locke did not borrow his ideas from Hobbes will be very apparent in our exposition of Locke; but meanwhile we may quote the testimony of Sir James Mackintosh, one of the best read of our philosophers, and one intimately acquainted with both these thinkers:—

'Locke and Hobbes agree chiefly on those points in which, except the Cartesians, all the speculators of their age were agreed. They differ on the most momentous questions—the

sources of knowledge, the power of abstraction, the nature of the will; on the two last of which subjects, Locke, by his very failures themselves, evinces a strong repugnance to the doctrine of Hobbes. They differ not only in their premisses and many of their conclusions, but in their manner of philosophising itself. Locke had no prejudice which could lead him to imbibe doctrines from the enemy of liberty and religion. His style, with all its faults, is that of a man who thinks for himself; and an original style is not usually the vehicle of borrowed opinions.*

To this passage we will add another from a still more distinguished judge:—

‘Few among the great names in philosophy have met with a harder measure of justice from the present generation than Locke, the unquestioned founder of the analytic philosophy of mind, but whose doctrines were first caricatured, then, when the reaction arrived, cast off by the prevailing school even with contumely, and who is now regarded by one of the conflicting parties in philosophy as an apostle of heresy and sophistry; while among those who still adhere to the standard which he raised, there has been a disposition in later times to sacrifice his reputation in favour of Hobbes—a great writer and a great thinker for his time, but inferior to Locke not only in sober judgment, but even in profundity and original genius. Locke, the most candid of philosophers, and one whose speculations bear on every subject the strongest mark of having been wrought out from the materials of his own mind, has been mistaken for an unworthy plagiarist, while Hobbes has been extolled as having anticipated many of his leading doctrines. He did not anticipate many of them, and the present is an instance in what manner it was generally done. [The writer is speaking of Locke’s refutation of *Essences*.] They both rejected the scholastic doctrine of Essences, but Locke understood and explained what these supposed essences were. Hobbes, instead of explaining the distinction between essential and accidental properties, and

* *Edinburgh Review*, October 1821, p. 242.

between essential and accidental propositions, jumped over it, and gave a definition which suits, at most, only essential propositions, and scarcely those, as the definition of Proposition in general.’*

Dugald Stewart indeed says ‘that it must appear evident Locke had diligently studied the writings of Hobbes;’ but Sir J. Mackintosh, as quoted above, has explained why Locke appears to have studied Hobbes; and Stewart is far from implying that Locke therefore gained his principal ideas from Hobbes. Indeed he has an admirable note in which he points out how completely Locke’s own was the important principle of *Reflection*. ‘This was not merely a step beyond Hobbes, but the correction of an error which lies at the very root of Hobbes’s system.’†

That Locke never read Hobbes may seem incredible, but is, we are convinced, the truth. It is one among many examples of how few were the books he had read. He never alludes to Hobbes in any way that can be interpreted into having read him. Twice only, we believe, does he allude to him, and then so distantly, and with such impropriety, as to be almost convincing with respect to his ignorance. The first time is in his *Reply to the Bishop of Worcester*, in which he absurdly classes Hobbes and Spinoza together. He says, ‘I am not so well read in Hobbes and Spinoza as to be able to say what were their opinions on this matter, but possibly there be those who will think your Lordship’s authority of more use than *those justly-decried writers*.’ The form of expression, ‘I am not so well read,’ etc. is obviously equivalent to—I have never read those justly-decried writers. His second allusion is simply this:—‘A Hobbit would probably say.’ We cannot at present lay our hands on the passage, but it refers to some moral question.

This is only negative evidence. Something like positive evidence however is the fact that Hobbes’s doctrine of Association

* MILL’S *System of Logic*, i. 150.

† *Dissertation on the Progress of Metaph. Philosophy*, p. 235 (HAMILTON’S ed.). The note is very long and curious.

of Ideas—a principle as simple of apprehension as it is important—was completely unknown to Locke, who, in the fourth or fifth edition, added the chapter on Association as it now stands. Moreover, Locke's statement of the law is by no means so satisfactory as that by Hobbes: he had not so thoroughly mastered it; yet, had he read it in Hobbes, he would assuredly have improved on it. That he did not at first introduce it into his work is a strong presumption that he had not then read Hobbes, because the law is so simple and so evident, when stated, that it must produce instantaneous conviction.

It is strange that any man should have read Locke, and questioned his originality. There is scarcely a writer we could name whose works bear such an indisputable impress of his having 'raised himself above the almsbasket, and, not content to live lazily on scraps of begged opinions, set his own thoughts to work to find and follow truth.' It is still more strange that any man should have read Locke and questioned his power. The patient sagacity which, above all things, distinguishes a philosopher is more remarkable in Locke than almost any writer. He was also largely endowed with good sense. In these two qualities, and in his homely racy masculine style, we see the type of the English mind, when at its best. The plain directness of his manner, his earnestness without fanaticism, his hearty honest love of truth, and the depth and pertinence of his thoughts, are qualities which, though they do not dazzle the reader, yet win his love and respect. In that volume, you have the honest thoughts of a great honest Englishman. It is the product of a manly mind: clear, truthful, direct. No vague formulas, no rhetorical flights, no base flattery of base prejudices, no assumption of oracular wisdom, no word-jugglery. There are so many writers who cover their inanity with a veil of words, who seem profound because they are obscure, that a plainness like Locke's deceives the careless reader, and leads him to suppose that what is there so plain must have been obvious.

Locke, though a patient cautious thinker, was anything

but a timid thinker; and it does great honour to his sagacity that at a time when all scientific men were exclaiming against the danger of hypotheses, believing that the extravagant errors of Schoolmen and alchemists were owing to their use of hypotheses—a time when the great Newton himself could be led into the unphilosophical boast, *hypotheses non fingo*, our wise Locke should exactly appreciate them at their true value. He says:—

'Not that we may not, to explain any phenomena of nature, make use of any probable hypotheses whatsoever. Hypotheses, if they are well made, are at least great helps to memory, and often direct us to new discoveries. But we should not take them up too hastily (which the mind that would always penetrate into the causes of things, and have principles to rest on, is very apt to do) till we have very well examined particulars, and made several experiments in that thing which we would explain by our hypothesis, and see whether it will agree to them all; whether our principles will carry us quite through, and not be as inconsistent with one phenomena of nature as they seem to accommodate and explain another; and, at least, that we take care that the name of principles deceive us not nor impose on us, by making us receive that for an unquestionable truth which is really at best but a very doubtful conjecture: such as are most (I had almost said all) of the hypotheses in natural philosophy.'

Locke could exchange his opinions with ease when he fancied that he saw their error. He readily retracted ideas which he had published in an immature form; 'thinking himself,' as he says, 'more concerned to quit and renounce any opinion of my own than oppose that of another, when truth appears against it.' He had a just and incurable suspicion of all 'great volumes swollen with ambiguous words.' He knew how much jugglery goes on with words; some of it conscious, some of it unconscious, but all pernicious. 'Vague and insignificant forms of speech and abuse of language have for so long passed for mysteries of science; and hard and misapplied words, with little or no meaning, have, by

prescription, such a right to be mistaken for deep learning and height of speculation, that it will not be easy to persuade either those who speak or those who hear them that they are but the covers of ignorance and hindrance of true knowledge. To break in upon this sanctuary of vanity and ignorance will be, I suppose, some service to the human understanding.'

Locke had an analytical mind. He desired to understand and to explain things, not to write rhetorically about them. There were mysteries enough which he was contented to let alone; he knew that human faculties were limited, and reverentially submitted to ignorance on all things beyond his reach. But though he bowed down before that which was essentially mysterious, he was anxious not to allow that which was essentially cognisable to be enveloped in mystery. Let that which is a mystery remain undisturbed: let that which is not necessarily a mystery be brought into the light of day. Know the limits of your understanding—*beyond* those limits it is madness to attempt to penetrate; *within* those limits it is folly to let in darkness and mystery: to be incessantly wondering, and always assuming that matters cannot be so plain as they appear, and that something lying deeper courts our attention.

To minds otherwise constituted—to men who love to dwell in the vague regions of speculation, and are only at ease in an intellectual twilight—Locke is naturally a disagreeable teacher. He flatters none of their prejudices; he falls in with none of their tendencies. Mistaking obscurity for depth, they accuse him of being superficial. The owls declare the eagle is blind. They prefer the twilight; he

Wantons in the smile of Jove.

They sneer at his 'shallowness.' So frequent are the sneers and off-hand charges against him that I, who had read in my youth with delight, began to suspect that my admiration had been rash. The proverb says, 'Throw but mud enough, some will be sure to stick.' It was so with Locke. Re-

iterated depreciation had somewhat defaced his image in my mind. The time came however when, for the purposes of this History, I had to read the *Essay on Human Understanding* once more, carefully, pen in hand. The image of John Locke was again revived within me; this time in more than its former splendour. His modesty, honesty, truthfulness, and directness, I had never doubted; but now the vigour and originality of his mind, the raciness of his colloquial style, the patient analysis by which he has laid open to us such vast tracts of thought, and above all, the manliness of his truly practical understanding, are so strongly impressed upon me that I feel satisfied the best answer to his critics is to say, 'Read him.' From communion with such a mind as his, nothing but good can result. He suggests as much as he teaches; and it has been well said, 'that we cannot speak of his *Essay* without the deepest reverence; whether we consider the era which it constitutes in philosophy, the intrinsic value (even at the present day) of its thoughts, or the noble devotion to truth, the beautiful and touching earnestness and simplicity which he not only manifests in himself, but has the power, beyond almost any writer, of infusing into his reader.'

§ III. LOCKE'S METHOD.

'It may be said that Locke created the science of Metaphysics,' says D'Alembert, 'in somewhat the same way as Newton created Physics. . . . To understand the soul, its ideas and its affections, he did not study books; they would have misdirected him; he was content to descend within himself, and after having, so to speak, contemplated himself a long while, he presented in his *Essay* the mirror in which he had seen himself. In one word, he reduced Metaphysics to that which it ought to be, viz. the experimental physics of the mind.'*

* 'En un mot, il réduisit la métaphysique à ce qu'elle doit être, en effet, la physique expérimentale de l'âme.'—*Discours Prélim. de l'Encyclopédie*.

This is great praise, and from high authority, but we suspect that it can only be received with some qualification. Locke made no great discovery which changed the face of science. He was not even the first to turn his glance inwards. Descartes and Hobbes had been before him.

Yet Locke had his Method; a Method peculiarly his own. Others before him had cast a hasty glance inwards, and dogmatised upon what they saw. He was the first to watch patiently the operations of his mind, that, watching, he might surprise the evanescent thoughts, and steal from them the secret of their combinations. He is the founder of modern Psychology. By him the questions of Philosophy are boldly and scientifically reduced to the primary question of the limits of human understanding. By him is begun the *history* of the development and combination of our thoughts. Others had contented themselves with the thoughts as they found them; Locke sedulously inquired into the *origin* of all our thoughts. To complete his Psychology, he should have opened an inquiry into the origin of our Faculties.

M. Victor Cousin, who, as a rhetorician, is in constant antagonism to the clear and analytical Locke, makes it an especial grievance that he and his school have considered the question respecting the origin of ideas as fundamental. 'It is from Locke,' he continues, 'that has been borrowed the custom of referring to savages and children, upon whom observation is so difficult; for the one class we must trust to the reports of travellers, often prejudiced and ignorant of the language of the country visited; for the other class (children), we are reduced to very equivocal signs.'*

Locke wanted to collect facts concerning the origin of ideas; and this is a practice inseparable from true scientific psychological research. Perhaps no source of error has been more abundant than the obstinacy with which men have in all times looked upon their associations as irresistible truths—as primary and universal truths. A little analysis—a little observation of minds removed from the

* *Histoire de la Philos.* 17 leçon.

influences which fostered those associations, would prove that those associations were not universal truths, but simply associations. It is because men have analysed the cultivated mind that they have been led to false results; had they compared their analysis with that of an uncultivated mind, they might have gained some insight. The objection against Locke's practice could only proceed from men who study Psychology without previous acquaintance with Physiology—which, though they do not know it, is the same as studying functions without any knowledge of the organs. Locke was the first who systematically sought in the history of the development of the mind for answers to many of the fundamental questions of Psychology, and he has been blamed for this, in the same spirit as that which dictated the sneers of John Hunter's professional contemporaries, because that admirable anatomist sought in comparative anatomy for elucidation of many anatomical problems. Nowadays no well-informed student is ignorant of the fact that Comparative Physiology and Embryology are our surest guides in all biological questions, simply because we therein see the problems gradually removed from many of the complexities which in the higher and more completely developed organisms frustrate our research. Locke saw clearly enough that the philosophers were accustomed to consider their minds as types of the human mind; whereas their minds, being filled with false notions and warped by prejudices, could in nowise be taken as types; for even granting that the majority of their notions were *true*, yet these true notions were not portions of the furniture of universal minds. He sought for illustrations from such minds as had not been so warped.

His object was 'to inquire into the *original, certainty, and extent*, of human knowledge.' He was led to this by a conversation with some friends, in which, disputes growing warm, 'after we had puzzled ourselves awhile, without coming any nearer a resolution of those doubts which perplexed us, it came into my thoughts that we took a *wrong*

course; and that, before we set ourselves upon inquiries of that nature, it was necessary to examine our own abilities, and *see what objects our understandings were or were not fitted to deal with.*

The plan he himself laid down is as follows:—

‘First, I shall inquire into the original of those ideas, notions, or whatever else you please to call them, which a man observes and is conscious to himself he has in his mind; and the ways whereby the understanding comes to be furnished with them.

‘Secondly, I shall endeavour to show what knowledge the understanding hath by those ideas; and the certainty, evidence, and extent, of it.

‘Thirdly, I shall make some inquiry into the nature and grounds of faith or opinion; whereby I mean that assent which we give to any proposition as true, of whose truth we have yet no certain knowledge; and we shall have occasion to examine the reasons and degrees of assent.’

We here see decisively settled the question so often raised respecting the importance of Locke’s Inquiry into Innate Ideas. ‘For Locke and his school,’ says M. Cousin, justly, ‘the study of understanding is the study of Ideas; hence the recent celebrated name of Ideology for the designation of the science of mind.’ Indeed, as we have shown, the origin of Ideas was the most important of all questions; upon it rested the whole problem of Philosophy.

According to the origin of our Ideas may we assign validity to them. If they are of human growth and development, they will necessarily partake of human limitations. As Pascal well says, ‘Si l’homme commençoit par s’étudier lui-même, il verroit combien il est incapable de passer outre. Comment pourroit-il se faire qu’une partie connût le tout?’

Locke has given us a few indications of the state of opinion respecting Innate Ideas, which it is worth while collecting. ‘I have been told that a short epitome of this treatise, which was printed in 1688, was condemned by

some without reading, because innate ideas were denied in it, they too hastily concluding that, if innate ideas were not supposed, there would be little left either of the notion or proof of spirits.’ Recapitulating the contents of the chapter devoted to the refutation of innate ideas, he says, ‘I know not how absurd this may seem to the masters of demonstration, and probably it *will hardly down with anybody at first hearing.*’ And elsewhere: ‘What censure doubting thus of innate principles may deserve from men, who will be apt to call it pulling up the old foundations of knowledge and certainty, I cannot tell; I persuade myself at least that the way I have pursued, being conformable to truth, lays those foundations surer.’

Locke’s inquiry was purely psychological; although he had been a student of medicine, he never indulges in any physiological speculations, such as his successors, Hartley and Darwin, delighted in. Ideas, and ideas only, solicited his analysis. Dugald Stewart has remarked that in the *Essay* there is not a single passage savouring of the anatomical theatre or of the chemical laboratory.

‘If by this inquiry into the nature of the understanding I can discover the powers thereof, how far they reach, to what things they are in any degree proportionate, and where they fail us, I suppose it may be of use to prevail with the busy mind of man to be more cautious in meddling with the things exceeding its comprehension, to stop when it is at the utmost extent of its tether, and sit down in a quiet ignorance of those things which upon examination are found to be beyond the reach of our capacities. We should not then perhaps be so forward, out of an affectation of universal knowledge, to raise questions and perplex ourselves and others about things to which our understandings are not suited, and of which we cannot frame in our minds any clear or distinct perceptions, or whereof (as it has perhaps too often happened) we have not any notions at all. Men have reason to be well satisfied with what God has thought fit for them, since he has given them, as St. Peter says, *πάντα πρὸς ζωὴν καὶ εὐσεβειαν*,

whatsoever is necessary for the convenience of life and the information of virtue ; and has put within the reach of their discovery the comfortable provision for this life, and the way that leads to a better. How short soever their knowledge may be of a universal or perfect comprehension of whatever is, it yet secures their great concerns, that they have light enough to lead them to the knowledge of their Maker and the *sight of their own duties*. Men may find matter sufficient to busy their heads and employ their hands with variety, delight, and satisfaction, if they will not boldly quarrel with their own constitutions, and throw away the blessings their hands are filled with because they are not big enough to grasp everything.

‘We shall not have much reason to complain of the narrowness of our minds if we will but employ them about what may be of use to us, for of that they are very capable ; and it will be an unpardonable as well as childish peevishness if we undervalue the advantages of our knowledge, and neglect to improve it to the ends for which it was given us, because there are some things set out of reach of it. It will be no excuse to an idle and untoward servant who would not attend his business by candle-light, to plead that he had not broad sunshine. The candle that is set up within us shines bright enough for all our purposes.

‘When we know our own strength, we shall the better know what to undertake with hopes of success ;* and when we have well surveyed the powers of our own minds, and made some estimate what we may expect from them, we shall not be inclined either to sit still, and not set our thoughts on work at all, despairing of knowing anything ; or, on the other side, question everything, and disclaim all knowledge because some things are not to be understood. It is of great use to the sailor to know the length of his line, though he cannot with it fathom all the depths of the ocean. It is well he knows that

* ‘The real cause and root of almost all the evils in science is this : that, falsely magnifying and extolling the powers of the mind, we seek not its true helps.’—BACON.

it is long enough to reach the bottom at such places as are necessary to direct his voyage, and caution him against running upon any shoals that they may ruin him. . . . This was that which gave the first rise to this Essay concerning the Understanding ; for I thought that the first step towards satisfying several inquiries the mind of man was very apt to run into was to take a survey of our own understandings, and to see to what things they were adapted. Till that was done I suspected we began at the wrong end, and in vain sought for satisfaction in a quiet and sure possession of truths that most concerned us, whilst we let loose our thoughts into the vast ocean of being ; as if that boundless extent were the natural and undoubted possession of our understandings, wherein there is nothing exempt from its decisions, or that escaped its comprehension. Thus men extending their inquiries beyond their capacities, and letting their thoughts wander into those depths where they can find no sure footing, it is no wonder that they raise questions and multiply disputes, which, never coming to any clear resolution, are proper only to continue and increase their doubts, and to confirm them at last in perfect scepticism.’

The objective tendency of Locke's unmetaphysical mind led him to a clear recognition of the Scholastic error respecting Essences, i.e. the existence of entities corresponding to general terms. He showed that what had for centuries been regarded as essences of classes were merely the signification of their *names* ; and I agree with Mr. Mill in considering this among the most valuable of the many services Locke rendered to Philosophy.

It should be added however that Locke, when ‘he extirpated the parent error, could not shake himself free from that which was its fruit. He distinguished two sorts of essences, Real and Nominal. His nominal essences were the essences of classes. But he also admitted real essences, or essences of individual objects, which he supposed to be the causes of the sensible properties of those objects. We know not, he said, what these essences are (and this acknowledgment rendered

the fiction comparatively innocuous); but if we did, we could from them alone demonstrate the sensible properties of the object, as the properties of the triangle are demonstrated from the definition of a triangle.*

The decisive manner in which Locke separates himself from the ontologists is historically noteworthy, and is also noticeable as giving the tone to his subsequent speculations. We have admired the Portico; let us enter the Temple.

§ IV. THE ORIGIN OF OUR IDEAS.

Hobbes had said, with Gassendi, that all our ideas are derived from sensations; *nihil est in intellectu quod non prius fuerit in sensu*. Locke, who is called a mere populariser of Hobbes, said that there were *two* sources, not *one* source, and these two were SENSATION and REFLECTION. Separating himself decisively from the upholders of the doctrine of innate ideas—of truths independent of experience,—he declared that all our knowledge is founded upon experience, and from experience it ultimately derives itself. Separating himself no less decisively from the Gassendists, who saw no source of ideas but Sensation, he declared that, although Sensation was the great source of all our ideas, yet there was ‘another fountain from which experience furnisheth the understanding with ideas;’ and this source, ‘*though it be not sense*, as having nothing to do with external objects, yet it is very like it, and might properly enough be called *internal sense*:’ this he calls Reflection.

After Dugald Stewart’s ample exposure of the widespread error that Locke was the chief of the so-called Sensational School, we need spend little time in inquiring whether Locke did or did not teach that all knowledge was referable to sensation. The passages which contradict the vulgar error are numerous and decisive. Dugald Stewart has selected several; but perhaps the one we have just quoted will be considered sufficiently explicit. Reflection, he says, ‘though

* MILL: *Logic*, i. 126.

it be not the sense,’ may yet analogically be considered as an internal sense. To prevent all misconception, however, we will as a decisive example refer to his proof of the existence of God, which he sums up by saying, ‘It is plain to me that we have a more certain knowledge of the existence of a God than of anything our senses have not immediately discovered to us. Nay, I presume I may say that we may more certainly know that there is a God than that there is anything else without us.’ (Book iv. ch. x.)

Historians have not accorded due praise to Locke for the important advance he made towards a solution of the great question respecting the origin of knowledge. While Leibnitz has been lauded to the skies for having expressed Locke’s doctrine in an epigram, Locke has not only been robbed of his due, but has been sacrificed to his rival. It is commonly said, ‘Locke reduced all our knowledge to Sensation: Leibnitz came and accepted the old adage of *nihil est in intellectu quod non prius fuerit in sensu*, but he accepted it as only half the truth; and therefore added *nisi ipse intellectus*.’ Now, firstly, Locke did not accept the adage as the whole truth; he said that Reflection was a second source of ideas. Secondly, Dugald Stewart has remarked that the addition which Leibnitz made when he said there is nothing in the intellect which was not previously in the sense, *except the intellect itself*, expresses no more than the doctrine of Locke, who says, ‘External objects furnish the mind with ideas of sensible qualities; and the mind furnishes the understanding with the ideas of its own operations.’ Thirdly, although the phrase is epigrammatic, and thereby has had such success in the world as epigrams usually have, it will not bear scrutiny: few epigrams will. Except as a verbal jingle, how trivial is the expression—the intellect *in* the intellect! Suppose a man to say, ‘I have no money in my purse, except my purse itself,’ he would scarcely be less absurd. For when the Schoolmen said, ‘nothing was in the intellect which was not previously in the sense,’ they did not mean that the intellect was the same as the sense; they meant that the intellect was furnished with no ideas, notions, or

conceptions, which had not been furnished them by sense; they meant that the senses were the inlets to the soul.

Dr. Whewell approves of the epigram; and alluding to Mr. Sharpe's objection to it, viz. that we cannot say the intellect is *in* the intellect, he says, 'This remark is obviously frivolous; for the faculties of the understanding (which are what the argument against the Sensational School requires us to reserve) may be said to be in the understanding with as much justice as we may assert that there are in it the impressions derived from sense.' We submit that the 'faculties' of the understanding are not 'all that must be reserved for the argument against the Sensational School' (if the Lockists be meant, and to them only did Leibnitz address himself), for the simple reason that the faculties *never* were denied.* Opponents have attributed such a notion to Locke's school; no member of that school ever proposed it. The question never was—*Have we an Understanding, and has that Understanding certain Faculties?* The question simply was—*What is the origin of our Ideas: are they partly innate and partly acquired; or are they wholly acquired, and, if so, is Sense the sole inlet?*

To this plain question some replied plainly, 'Sense is the origin of all our ideas.' Locke replied, 'Sense and Reflection are the sources of all our ideas.'

Leibnitz replied, 'There is nothing in the intellect which was not previously in the sense; except the intellect itself:' which latter remark is altogether *beside* the question. And yet this remark has called forth many pages of laudatory declamation: in which Locke is cast into the background, and charged with having overlooked the important fact that man has an intellect as well as senses. This notion, once started, continued its triumphant course. Men are for the most part like sheep, who always follow the bell-wether: what one

* LOCKE often speaks of the operations of the mind as proceeding from powers intrinsic and proper to itself. He says also: 'Thus the first *capacity* of human intellect is that the mind is fitted to receive the impressions made on it; either through the senses by outward objects or by its own operations when it reflects on them.'—*Essay*, b. ii. c. i. § 24.

boldly asserts, another echoes boldly; a third transmits it to a fourth, and the assertion becomes consolidated into a traditional judgment. Some one more serious, or more independent than the rest, looks into the matter; sees an error, exposes it; but tradition rolls on its unimpeded course. I do not expect to shake the traditional error respecting Locke; I was bound, however, to signalise it. Locke does *not* derive all our knowledge from sensation; Leibnitz has *not* made any addition by his too famous *nisi ipse intellectus*.*

By Sensation, Locke understands the simple operation of external objects through the senses. The mind is herein wholly passive. The senses, therefore, may be said to furnish the mind with one portion of its *materials*. By Reflection he understands that internal sense by means of which the mind observes its own operations. This furnishes the second and last portion of the materials out of which the mind frames knowledge. 'If it shall be demanded,' he says, 'when a man begins to have any ideas, I think the true answer is, when he first has any sensation. For since there appear not to be any ideas in the mind before the senses have conveyed any in, I conceive that ideas in the understanding are coeval with sensation.' This is making a decisive stand against the upholders of innate ideas; but it is a very rude and incomplete view.

Plato finely compares the soul to a book, of which the senses are the scribes.† Now writing is only possible after a series of tentatives; the hand must practise before it can steady itself sufficiently to trace letters; so also must the senses learn by repetition to trace intelligible figures on the *tabula rasa* of the mind.

Locke continues his account of the origin of all our knowledge thus: 'In time the mind comes to reflect on its own operations about the ideas got by sensation, and thereby

* LEIBNITZ himself says, when making the distinction, 'Cela s'accorde assez avec votre auteur de l'Essai, qui cherche une bonne partie des Idées dans la réflexion de l'esprit sur sa propre nature.'—*Nouveaux Essais*, ii. c. i.

† *Philebus*, p. 192, ed. BEKKER. PLATO's words are not given in the text, but the sense is.

stores itself with a new set of ideas, which I call ideas of reflection. These are the impressions which are made on our senses by outward objects that are extrinsic to the mind, and its own operations proceeding from powers intrinsic and proper to itself; which when reflected on by itself, becoming also objects of its contemplation, are, as I have said, the original of all knowledge. Thus the first capacity of the human intellect is that the mind is fitted to receive the impressions made on it; either through the senses by outward objects or by its own operations when it reflects on them. This is the first step that a man makes towards the discovery of and the groundwork whereon to build all those notions which ever he shall have naturally in this world. All those sublime thoughts which tower above the clouds, and reach as high as heaven itself, take their rise and footing here: in all that good extent wherein the mind wanders, in those remote speculations it may seem to be elevated with, it stirs not one jot beyond those ideas which sense or reflection have offered for its contemplation.'

'When the understanding is once stored with these simple ideas, it has the power to repeat, compare, and unite, them, even to an almost infinite variety, and so can make at pleasure new complex ideas. But it is not in the power of the most exalted wit, or enlarged understanding, by any quickness or variety of thought, to invent or frame one new simple idea in the mind not taken in by the ways aforementioned.'

Whoever attentively considers these passages, or consults the *Essay on the Understanding* with a view of ascertaining what precisely was the position held by Locke, will, I think, soon arrive at the conviction that, although he presupposes the existence of an active Mind (consequently of Faculties capable of being excited into activity by the operation of external objects on it through Sense), he was in a state of indecision and confusion respecting the faculties themselves and the true psychological process; he could not therefore fairly meet all the objections which the other school might urge.

He is distinguished from the Sensational School by the absence of any notion of evolving the Faculties from sensations. He proclaimed Sense the purveyor of food for the Mind; he did not conceive that Mind itself was developed out of Sense. As to ideas, the mind was a *tabula rasa* before experience came to write on it; but as to Faculties, the mind was—something which he had never made clear to himself.

Thus although he was strong in argument against Innate Ideas, and against all the attempts to establish a source of knowledge independent of experience, he had but confused notions of what this Mind was, the existence of which he assumed, and of what relations of dependence existed between the Faculties and sensations. In a word, the elementary biological facts were unsuspected; and consequently there was much in his exposition which was unsatisfactory; as opponents were quick in discovering.

Opponents, however, and especially Leibnitz, committed a great oversight in charging him with not having recognised the fact on which they lay so much stress, namely, that we have ideas which have their foundation in the Mind, and which consequently have a certitude superior in its universality and necessity to any sense-knowledge. These ideas are derived from the perception of the relations which exist among our abstract ideas—as in mathematics. Thus while the origin of all simple ideas is in Sense, and our certitude can never go beyond what is thus given in experience, the relations of these ideas among each other are of universal *a priori* certitude.

§ V. ELEMENTS OF IDEALISM AND SCEPTICISM IN LOCKE.

It is certain that Locke was neither an Idealist, like Berkeley, nor a Sceptic, like Hume. Nevertheless, if we examine attentively, we shall see certain elements in his psychology which were easily developed into both these doctrines.

Can we know things as they are? Descartes and his

followers suppose that we can: their criterion is the clearness and distinctness of ideas. Locke said, '*Distinct* ideas of the several sorts of bodies that fall under the examination of our senses, perhaps we may have; but *adequate* ideas I suspect we have not of any one amongst them.' Our ideas, however clear, are never adequate; they are subjective. But Locke only went halfway towards the conception of knowledge as subjective. He did not think that all our ideas were images, copies of external objects; but he expressly taught that our ideas of what he calls *primary qualities* are *resemblances* of what really exists in bodies; adding, that 'the ideas produced in us by *secondary* qualities have no resemblances of them at all. There is nothing like our ideas existing in the bodies themselves. They are, in the bodies we denominate from them, only a power to produce those sensations in us.'

It is remarkable that the last sentence did not lead him to the conclusion that *all* the qualities which we perceive in bodies are but the powers to produce sensations in us; and that it is we who attribute to the causes of these sensations a form analogous to their effects. He himself warned us 'that so we may not think (as perhaps usually is done) that they (ideas) are exactly the images and resemblances of something inherent in the subject; most of those of sensation being in the mind no more the likeness of something existing without us than the names that stand for them are likenesses of our ideas, which yet upon hearing they are apt to excite in us.' And elsewhere, 'It being no more impossible to conceive that God should annex such ideas to such motions (i.e. the motions of objects affecting the senses) with which they have no similitude than that he should annex the idea of pain to the motion of a piece of steel dividing our flesh, with which that idea hath no resemblance.'

From these passages it will be seen how clearly Locke understood the subjective nature of one portion of our knowledge. He did not carry out the application of his principles to primary qualities, owing perhaps to inveterate association having too firmly established the contrary in his

mind. Everyone is willing to admit that colour, light, heat, perfume, taste, etc. are not qualities in the bodies which are reproduced in us, but simply conditions of our Sensibility, when placed in certain relations with certain bodies. Yet few are willing to admit—indeed only philosophers (accustomed as they are to undo their constant associations) can conceive that the primary qualities, viz. extension, solidity, motion, and number, are other than real qualities of bodies—*copies* of which are impressed upon us. And yet these qualities are no less subjective than the former. They do not belong at all to bodies, except as powers to produce in us the sensations. They are demonstrably as much the effects produced in us by objects as the secondary qualities are; and the latter everyone admits to be the *effects*, and not *copies*. Wherein lies the difference? wherein the difficulty of conceiving primary qualities not to belong to bodies? In this: the primary qualities are the *invariable* conditions of sensation. The secondary qualities are the *variable* conditions. We can have no perception of a body that is not extended, that is not solid (or the reverse), that is not simple or complex (number), that is not in motion or rest. These are invariable conditions. But a body is not necessarily of any particular colour, taste, scent, heat, or smoothness; it may be colourless, tasteless, scentless. These secondary qualities are all variable. Consequently the one set, being invariable, have occasioned indissoluble associations in our minds, so that it is not only impossible for us to imagine a body, without at the same time imagining it as endowed with these primary qualities; but also we are irresistibly led to believe that the bodies we perceive do certainly possess those qualities quite independently of us. Hence it has been said that the Creator himself could not make a body without extension: for such a body is impossible. The phrase should be, 'such a body it is impossible for *us* to conceive.' But our indissoluble associations are not proofs of objective reality.

That we cannot conceive body without extension is true; but that, because we cannot conceive it, the contrary must

be false is preposterous. All our assertion in this matter can amount to is that knowledge must be subordinate to the conditions of our nature. These conditions are not conditions of things, but of our organisations. If we had been so constituted as that all bodies should affect us with a sensible degree of warmth, we should have been irresistibly led to conclude that warmth was a quality inherent in body; but because warmth varies with different bodies, some warm, others cold, there is no indissoluble association formed. And so of the other qualities.

To return to Locke: he has very well stated the nature of our knowledge of external things, though he excepts primary qualities. 'It is evident,' he says, 'that the bulk, figure, and motion of several bodies about us produce in us several sensations, as of colours, sounds, tastes, smells, pleasure and pain, etc. These mechanical affections of bodies having no affinity at all with those ideas they produce in us (there being no conceivable connection between any impulse of any sort of body, and any perception of a colour or smell which we find in our minds), we can have no distinct knowledge of such operations beyond our experience, and can reason about them no otherwise than as the effects produced by an infinitely wise Agent, which perfectly surpass our comprehensions.'

He shortly after says, 'The things that, as far as our observation reaches, we constantly find to proceed regularly, we may conclude do act by a law set them; but yet by a law that we know not: whereby, though causes work steadily, and effects constantly flow from them, yet their connections and dependencies being not discoverable in our ideas, we can have but an experimental knowledge of them.'

Here we have Hume's doctrine of Causation anticipated.

To prove the subjective nature of our knowledge is but one step towards the great question. The second step, which it is vulgarly supposed was only taken by Berkeley and Hume, was also taken by Locke. Hear him. 'Since the mind in all its thoughts and reasonings hath no other

immediate object but its own ideas, which it alone does or can contemplate, it is evident that our knowledge is only conversant about them. Knowledge, then, seems to me nothing but the perception of the connection and agreement, or disagreement and repugnancy, of any one of our ideas.'

This is the great stronghold of Idealism and Scepticism. Locke foresaw the use which would be made of it; and he stated the problem with remarkable precision. 'It is evident that the mind knows not things immediately, but only by the intervention of ideas it has of them. Our knowledge therefore is real only so far as there is a conformity between our ideas and the reality of things. *But what shall be here the criterion? How shall the mind, when it perceives nothing but its own ideas, know that they agree with the things themselves?*'

Thus has he stated the problem which was solved by Idealism on the one hand, and by Scepticism on the other. Let us see how it will solve it. There are two sorts of ideas, he says, the simple and the complex; or, to use more modern language, perceptions and conceptions. The first 'must necessarily be the product of things operating on the mind in a natural way, and producing those perceptions which by the wisdom and will of our Maker they are ordained and adapted to. From whence it follows that simple ideas are not fictions of our fancies, but the natural and regular productions of things without us really operating upon us; and so carry with them all the conformity which is intended, or which our state requires: for they represent things to us under those appearances which they are fitted to produce in us.'

This leaves the question of Idealism unanswered, though it cuts the Gordian knot of Scepticism. It is a plain and explicit avowal of the relativity of our knowledge; of the impossibility of our ever transcending the sphere of our consciousness and penetrating into the essence of things. Complex ideas being made out of simple ideas, we need not

examine their pretensions to infallibility. All human certainty is therefore only a relative certainty. Ideas may be true for us, without being at all true when considered absolutely. Such is Locke's position. He stands upon a ledge of rock between two yawning abysses. He will stand there, and proceed no further. Why should he move when he knows that a single step will precipitate him into some fathomless gulf? No; he is content with his ledge of rock. 'The notice we have by our senses,' he says, 'of the existence of things without us, though it be not altogether so certain as our intuitive knowledge or the deductions of our reason, employed about the clear abstract ideas of our own minds; yet it is an assurance that deserves the name of knowledge. If we persuade ourselves that our faculties act and inform us right concerning the existence of those objects that affect them, it cannot pass for an ill-grounded confidence; for I think nobody can in earnest be so sceptical as to be uncertain of the existence of those which he sees and feels. At least he that can doubt so far (whatever he may have with his own thoughts) will never have any controversy with me, since he can never be sure I say anything contrary to his own opinions. As to myself, I think God has given me assurance enough as to the existence of things without me; since by their different application I can produce in myself both pleasure and pain, which is one great concernment of my present state. We cannot act by anything but our faculties; nor talk of knowledge but by the help of those faculties which are fitted to apprehend even what knowledge is.'

Again, anticipating the objection that 'all we see, hear, feel and taste, think and do, during our whole being, is but the series and deluding appearances of a long dream, and therefore our knowledge of anything be questioned; I must desire him to consider that, if all be a dream, then he doth but dream that makes the question; and so it is not much matter that a waking man should answer him. But yet, if he pleases, he may dream that I make him this answer, That the *certainty* of things existing in *in rerum naturâ*, when we

have the testimony of our senses for it, is not only as great as our frame can attain to, but as our condition needs.' This leaves Idealism unanswered; but it pronounces Scepticism to be frivolous: 'for our faculties,' he continues, 'being not suited to the full extent of being, nor to a perfect, clear, comprehensive knowledge of things free from all doubt and scruple, but to the preservation of us, in whom they are, and accommodated to the use of life; they serve our purpose well enough, if they will but give us certain notice of those things which are convenient or inconvenient to us.'

That this is very good common-sense everyone will admit. But it is no answer to Scepticism. Hume, as we shall see hereafter, proclaimed the very same opinions: but the difference between him and Locke was that he knew such opinions had no influence whatever upon the philosophical question, but simply upon the practical affairs of life; whereas Locke, contenting himself with the practical, disdained to answer the philosophical question.*

We may sum up the contents of this section by saying that Locke distinctly enough foresaw the Idealistic and Sceptical arguments which might be drawn from his principles. He did not draw them, because he thought them frivolous. Aware that all human certitude could only be relative certitude—that human knowledge could never embrace the nature of things, but only the nature of their effects on us—he was content with that amount of truth, and 'sat down in quiet ignorance of those things which are beyond the reach of our capacities.' The grand aim of the *Essay* was to prove that all knowledge is founded on Experience. That proved, he was aware that Experience never could be other than relative—it could only be *our* Experience of things; and our Experience could be no *absolute* standard; it could only be a standard for us.

* REID conjectures that 'Locke had a glimpse of the system which Berkeley afterwards advanced, though he thought proper to suppress it within his own breast.' Not to suppress, but to disdain it.

§ VI. LOCKE'S CRITICS.

We cannot leave the great Englishman without adverting to the tone adopted by many of his critics. This tone has been anything but considerate.

That men should misrepresent Spinoza, Hobbes, or Hume, is intelligible enough; they are frightened, and in their terror exaggerate and distort what they see. That they should misrepresent Kant, Fichte, or Hegel, is also intelligible; the remoteness of the speculations and the difficulty of the language are sufficient excuses. But that they should misrepresent Locke is wholly inexcusable. He was neither an audacious speculator nor a cloudy writer. His fault was that he spoke plainly and honestly. He endeavoured to explain the Chemistry of the Mind (if the metaphor be permissible), renouncing the vague futile dreams of Alchemy. All those men who still seek to penetrate impenetrable mysteries, and refuse to acknowledge the limits of man's intelligence, treat Locke with the same superb disdain as the ambitious alchemists treated the early chemists. The tone in which most modern Frenchmen and Germans speak of Locke is painful; the tone in which many Englishmen speak of him is inexcusable.

There is no excuse for not understanding Locke. His language may be occasionally loose and wavering, but his meaning may always be gathered from the context. He had not the lucidity of Descartes or of Hobbes; but he was anxious to make himself intelligible, and to this end he varied his expressions, and stated his meaning in a variety of forms. He must not be taken literally. No single passage is to be relied on, unless it be also borne out by the whole tenour of his speculations. Any person merely 'dipping into' the *Essay* will find passages which seem very contradictory; any person carefully reading it through will find all clear and coherent.

The most considerable of Locke's modern critics is Victor Cousin. He has undertaken an examination and refutation of

all Locke's important positions. The eminence of his name and the popular style of his lectures have given great importance to his criticism; but if we are to speak frankly, we must characterise this criticism as very unfair, and extremely shallow. We cannot here examine his examination: a volume would not suffice to expose all his errors. Let one example of the unfairness, and one of the shallowness, suffice:—

Speaking of the principle of reflection, he says: 'In the first place, remark that Locke here evidently confounds reflection with consciousness. Reflection, strictly speaking, is doubtless a faculty analogous to consciousness, but distinct from it, and which more particularly belongs to philosophers, whereas consciousness belongs to every man.'

We answer that, in the first place, so far from its being evident that Locke confounds reflection with consciousness, his whole *Essay* proves the contrary. In the second place, M. Cousin, using the word reflection in a peculiar sense (viz. as tantamount to speculation), forces that sense upon Locke, and thus makes the contradiction! If M. Cousin had interpreted Locke fairly, he could never have thus 'caught him on the hip.'

It is quite true that, in the passage quoted by M. Cousin, the faculty of reflection is limited to the operations of the mind; but, as we said, to pin Locke down to any one passage is unfair; and his whole *Essay* proves, in spite of some ill-worded definitions, that by reflection he meant very much what is usually meant by it, viz. the activity of the mind in combining the materials it receives through sense, and becoming thus a source of ideas.

This leads us to the second example. M. Cousin, wishing to prove, against Locke, that we have ideas from some other source beside sensation and reflection, instances the idea of space, and examines how it was possible to obtain that idea through sensation and reflection. That the idea of pure space could not have been obtained through the senses he seems to think is satisfactorily proved by proving that the idea has

nothing sensuous in it; that it could not have been obtained through reflection, because it has nothing to do with the operations of our understanding, is equally evident to him. Hence, as both sources fail, he pronounces Locke's account of the origin of our knowledge 'incomplete and vicious.'

This argument, which extends to several pages, is deemed by M. Cousin triumphant. Locke indeed says that 'we get the idea of space both by our sight and touch.' Any honest inquirer would never quibble upon this—would never suppose Locke meant to say that space is a *sensation*. He would understand that Locke meant to say, 'the idea of space is an abstraction: the primary materials are obtained through our touch and sight.' Locke did not anticipate any quibbling objection, so did not guard against it; but in his explanation of our idea of substance he has given an analogous case; although his antagonists have also frequently objected that the idea of substance never could have been obtained through sense. It has been thought an irresistible argument against Locke's theory: the very fact that we have an idea of substance is supposed to be sufficient proof of some other source of knowledge than sensation and reflection. This is an example of how carelessly Locke has been read. He expressly tells us, in more places than one, that the idea of substance (and by idea he does not here mean *image*, but a *thought*) is an inference grounded upon our experience of external things. True it is that we perceive nothing but phenomena, but our minds are so constituted that we are forced to suppose these phenomena have substances lying underneath them.

'If anyone will examine himself,' he says 'concerning his notions of pure substance in general, he will find he has no other idea of it at all, but only a supposition of he knows not what support of such qualities which are capable of producing simple ideas in us, which qualities are commonly called accidents. If anyone should be asked what is the subject wherein colour or weight inheres, he would have nothing to say but the solid extended parts; and if he were demanded

what is it that solidity and extension inhere in; he would not be in a much better case than the Indian who, saying that the world was supported by a great elephant, was asked what the elephant rested on, to which his answer was, A great tortoise; but being again pressed to know what gave support to the great broad-backed tortoise, replied, Something, he knew not what.'

The same course of argument will apply to space. M. Cousin declaims, and brings forward many arguments and illustrations, all utterly trivial, to show that the idea of space could never have been a sensation. A little more attention in reading the author he attacks would have saved him all this trouble. Locke never for an instant supposed that the idea of space could have been a sensation: on the fact that it could not, he grounds his position that the idea is vague, and is a mere 'supposition.'

Now let us hear an Englishman, who is also an historian:—'We need not spend much time in pointing out the inconsistencies into which Locke fell,' says Dr. Whewell, 'as all must fall into inconsistencies who recognise no source of knowledge except the senses.' Let us remark, in the first place, that it is surely a questionable procedure thus to pass over so great a man as Locke, whose influence has been general and lasting, and whose 'inconsistencies' it behoved Dr. Whewell, more than most men, to refute, inasmuch as Locke's principles refute *his* whole philosophy. Secondly, it is a misrepresentation to assert Locke's having recognised 'no source of knowledge except the senses.' Locke *did* recognise another source. 'Thus he maintains,' continues Dr. Whewell, 'that our idea of space is derived from the senses of sight and touch—our idea of solidity from the touch alone. Our notion of substance is an unknown support of unknown qualities, and is illustrated by the Indian fable of the tortoise which supports the elephant which supports the world.'

Space we have already considered in answering M. Cousin. As to solidity, if the idea be not derived from the sensation,

from whence is it derived? And as to substance, we must here again notice a misrepresentation of Locke, who does not define it as 'an unknown support of unknown qualities,' but as an unknown support of *known* qualities: from our knowledge of the qualities we infer the existence of some substratum in which they inhere. We are, with respect to substance, somewhat in the condition of a blind man, who, whenever he moved in a certain direction, should receive a blow from some revolving wheel. Although unable to see the wheel, and so understand the cause of pain he received, he would not hesitate to attribute that cause to something without him. All he could ever know, unassisted, would be the fact of his being struck when he moved in a certain direction; he could have no other knowledge of the wheel, yet he would be quite certain that there was something besides his pain, and that unknown something would stand to him in a relation somewhat similar to that in which the unknown support of known accidents of bodies stands to us. This is Locke's meaning.

'Our notion of power or cause,' continues the historian, 'is in like manner got from the senses; and yet, though these ideas are thus mere fragments of our experience, Locke does not hesitate to ascribe to them necessity and universality when they occur in propositions. Thus he maintains the necessary truth of geometrical properties; he asserts that the resistance arising from solidity is absolutely insurmountable; he conceives that nothing short of Omnipotence can annihilate a particle of matter; and he has no misgivings in arguing upon the axiom that everything must have a cause. He does not perceive that, upon his own account of the origin of our knowledge, we can have no right to make any of these assertions. If our knowledge of the truths which concern the external world were wholly derived from experience, all that we could venture to say would be, that geometrical properties of figures are true *as far as we have tried them*; that we have seen *no example* of a solid body being reduced to occupy less space by pressure, or

of a material substance annihilated by natural means; and that, *wherever we have examined*, we have found that every change has had a cause.'

This is only one among many instances of Dr. Whewell's want of accurate interpretation of Locke. The fallacy on which his argument rests, we shall examine at some length when we come to treat of Kant. Meanwhile let the following passage prove that Locke did not hesitate to ascribe necessity and universality to certain ideas when they 'occur in propositions,' but very clearly explained the nature of this necessity in a masterly passage: 'There is one sort of propositions concerning the existence of anything answerable to such an idea; as having the idea of an elephant, phoenix, motion, or angle, in my mind, the first and natural inquiry is whether such a thing does anywhere exist. And this knowledge is only of particulars. No existence of anything without us, except God, can certainly be known further than our senses inform us.

'There is another sort of propositions, wherein is expressed the agreement or disagreement of our abstract ideas and their dependence on one another. *Such propositions may be universal and certain.* So, having the idea of God and of myself, of fear and obedience, I cannot but be sure that God is to be feared and obeyed by me: and this proposition will be certain concerning man in general, *if I have made an abstract idea of such species whereof I am one particular.* But yet this proposition, how certain soever, that men ought to fear and obey God, proves not to me the existence of men in the world, but *will be true of all such creatures wherever they do exist*: which certainty of such general propositions depends on the agreement or disagreement to be discovered in those abstract ideas. In the former case our knowledge is the consequence of the existence of things producing ideas in our minds by our senses; in the latter, knowledge is the consequence of the ideas (be they what they will) that are in our minds producing their general certain propositions.

'Many of these are called *æternæ veritates*; and all of them

indeed are so; not from being written in the minds of all men, or that they were any of them propositions in anyone's mind till he, having got the abstract ideas, joined or separated them by affirmation or negation. But wheresoever we can suppose such a creature as man is endowed with such faculties, and thereby furnished with such ideas as we have, we must conclude he must needs, when he applies his thoughts to the consideration of his ideas, know the truth of certain propositions that will arise from the agreement or disagreement which he will perceive in his own ideas. Such propositions therefore are called eternal truths, not because they are eternal propositions actually formed and antecedent to the understanding that makes them; nor because they are imprinted on the mind from any patterns that are anywhere of them out of the mind and existed before; but because being once made about abstract ideas so as to be true, they will, whenever they can be supposed to be made again at any time by a mind having those ideas, always actually be true.* This passage is sufficient to exonerate him from the charge of inconsistency; sufficient also, we believe, to show the error of Dr. Whewell's own conception of the necessity of certain truths.

The foregoing are samples of the style in which the great master of Psychology is spoken of by his most modern critics. Let them be sufficient warning to the reader of what he is to expect from the partisans of the reaction against Locke, and his followers; and stimulate him to the careful study of that author who 'professes no more than to lay down, candidly and freely, his own conjectures concerning a subject lying somewhat in the dark, without any other design than an unbiassed inquiry after truth.'

* *Essay*, book iv. ch. xi. §§ 13, 14.

CHAPTER III.

LEIBNITZ.

LEIBNITZ was a variously accomplished man, whose immense activity made itself conspicuous in many directions. One of the most illustrious of metaphysicians, it is not his fault, but the fault of the Metaphysical Method, if his speculations sometimes outrage common sense. And yet it is not easy for those who adopt the Method to point out a flaw in the reasoning, even when that reasoning conducts him to such hypotheses as the Pre-established Harmony and the Monadology.

While Locke was doing his utmost to destroy Ontology by a psychological proof of the relativity of knowledge, his great critic endeavoured to place Ontology on a scientific basis. He constructed a scheme from logical principles, accepted *à priori*. The principle of Contradiction, the principle of Sufficient Reason, the principle of Final Cause, the principle of Agreement (*convenientia*), were all, so to speak, derived from the *à priori* notions of the wisdom and goodness of God. Among the infinitude of possibilities, God, being good, must have chosen that which is best. And what is best? That which presents the most perfect order and harmony. The basis of all philosophy, therefore, will be the conviction that whatever is is for the best; that everything is good, harmonious, and beautiful. 'On voit par là comment la véritable physique doit être puisée effectivement à la source des perfections divines.' Philosophy is a Theodicy.

One seems in such passages to hear the murmur of the schools of the twelfth and thirteenth centuries. Leibnitz

indeed was a strayed scholastic; and although he investigated scientific problems, he was inspired by the metaphysical spirit. Experience was relegated to a second rank. Subordinated to Reason, it might occasionally suggest a discovery; and indeed was necessary as verification. But the basis of deduction, he taught, is always that of final cause. Induction alone is powerless.

'Ainsi, deux grands principes, l'axiome de l'identité et celui de la convenance; deux ordres de vérités et deux procédés de recherche; d'une part les vérités nécessaires et la déduction logique, sphère du possible et du vrai, où se rangent avec les mathématiques, la métaphysique, la logique et la morale; d'autre part, les vérités contingentes, et l'induction éclairée par la considération de la sagesse divine et vérifiée par les expériences; sphère de l'actuel et du réel, objet propre de la physique; telle est, réduite à sa plus simple expression, la méthode de Leibnitz.'*

Whoever reads the *Monadologie* with attention will perceive the remarkable ingenuity and consistency of Leibnitz in his application of the method; but a reader who is dissatisfied with the method itself, and rejects its deductive pretensions, will pronounce this ingenuity strangely misplaced. Descartes, having separated Mind from Matter, as two essentially distinct entities, immediately perceived the difficulty of how the one could act upon the other. Malebranche† solved it by the once famous hypotheses of 'occasional causes':—We see all things in God; and it is God who produces sensations in us coincident with the movements of bodies, or *vice versa* produces movements in bodies coincident with our volitions.

Leibnitz also saw the difficulty, but never suspected that in it lay the disproof of the distinction established by Descartes; indeed, no man in those days had a suspicion that Mind might possibly be no entity at all to be acted on; unable, therefore, to conceive mind as a function, and forced

* JACQUES: *Œuvres de Leibnitz*, introd. xiii.

† MALEBRANCHE: *Recherche de la Vérité*, lib. vi. ch. 3. Comp. DESCARTES: *Princip. Phil.* ii. § 36.

to accept it as an entity, the difficulty of conceiving how Body could act upon it was immense. He objected to the explanation of 'occasional causes,' because it involved a perpetual miracle. Why a perpetual miracle should be rejected, he did not make clear; still less did he show wherein his favourite hypothesis of a Pre-established Harmony (borrowed from Spinoza) surpasses the philosophic value of Occasional Causes: the two only differ as a constant and a constantly-renewed action of the deity; the fluent motion of Gods agency, of the one conception, is crystallised into the preordained plan, of the other.

Impressions on the body create sensations in the mind; but how? Leibnitz thought that body and mind were as two independent but corresponding machines. They are so adjusted that they are like two unconnected clocks, constructed so as that the instant one strikes the hour, the other *points* it. 'I cannot help coming to this notion,' he says, 'that God created the soul in such a manner at first that it should *represent* within itself all the simultaneous changes in the body; and that he has made the body also in such a manner as that it must of itself do what the soul wills: so that the laws which make the thoughts of the soul follow each other in regular succession *must* produce *images* which shall be coincident with the impressions made by external objects upon our organs of sense; while the laws by which the motions of the body follow each other are likewise so coincident with the thoughts of the soul as to give to our *volitions* and *actions* the very same appearance as if the latter were really the natural and the necessary consequence of the former.'

The impossibility of the mind being impressed by objects from without, consequently of anything like a direct action of the one on the other, is deducible from the nature of monads. Complex objects must be composed of simple objects, every body is a collection of units or monads. But these units cannot be penetrated, consequently can receive nothing from without. The soul is a monad, or simple

substance, consequently can receive nothing from without. Thus we see that sensation cannot be the effect of an impression of body upon mind, but a change in the state of mind produced in it by its own force.

But what is sensation? By sensation the soul represents to itself the body; now as the soul is simple, and the body composite, sensation is nothing but the representation of the composite in the simple. Sensations, being actions of the soul, must have their sufficient reason, and this is the *representative force*. It is this force which constitutes the essence and nature of the soul.

Every sensation has its sufficient reason in the preceding sensations; every state of the soul is determined by that which precedes and determines that which succeeds it. *Le présent est gros de l'avenir.*

But starting from the present condition of the soul, we arrive at the primitive condition, anterior to all determinations, and this is the representation of the composite in the simple, combined with the representative force. God created the soul with the idea of body, and with the representative force which produces a series of representations each the sufficient reason of the other. By this means the series of states of each soul has been established. It is absurd, therefore, to speak of the soul as a *tabula rasa*. Nothing comes to it from without, all from within.

With such a Method, and with such results, Leibnitz was not likely to lend the aid of his powerful mind in the construction of an inductive Psychology; accordingly we see in him the resolute antagonist of Locke. At first he answered Locke in a few paragraphs of a somewhat supercilious tone. He evidently looked upon the *Essay on the Human Understanding* as not destined to achieve any influential reputation.* This opinion he lived to alter; and in his *Nouveaux Essais sur l'Entendement Humain*, he brought all his forces to bear upon the subject; he grappled with the *Essay*, and disputed the

* See *Réflexion sur l'Essai de M. Locke*, in the *Recueil* of DESMAIZEAUX, vol. ii.

ground with it inch by inch. This remarkable work was not published till many years after his death, and is not included in the edition by M. Dutens. It was unknown to Dugald Stewart; and this fact will explain a passage in his *Dissertation*, where he says that Leibnitz always speaks coldly of Locke's *Essay*. Leibnitz does so in his earlier works; but in the *Nouveaux Essais* he treats his great adversary with due respect, and in the preface speaks of him with eulogy. 'The *Essay concerning Human Understanding*, written by an illustrious Englishman, being one of the finest and most esteemed works of our time, I have resolved to make some comments on it. . . . Thus I shall procure a favourable introduction for my thoughts by placing them in such good company. . . . It is true that I am often of a different opinion; but so far from detracting on that account from the merit of this celebrated writer, that I do him justice in making known in what and wherefore I differ from him, when I judge it necessary to prevent his authority from prevailing over reason on some important points. In fact, although the author of the *Essay* says a thousand things which I must applaud yet our systems greatly differ. His has greater affinity to that of Aristotle,—mine, to that of Plato.' This is the spirit in which the Homeric heroes regard their adversaries; an interchange of admiration for each other's prowess does not deaden one of their blows, but it makes the combat more dignified.

Leibnitz belonged to the Cartesians; but he also mingled with the doctrines of Descartes certain ideas which he had gathered from his commerce with antiquity. Plato, and Democritus especially, influenced him. To a mind thus furnished, the doctrines of Locke must needs have been unwelcome; indeed they could not be expected to gain admission. Moreover, as F. Schlegel observed, every man is born either a Platonist or an Aristotelian.* Leibnitz and

* COLERIDGE used to pass off this aphorism as his own. It is to be found, however in SCHLEGEL: *Geschichte der Literatur*.

Locke were examples of this antagonism: 'Our differences,' says Leibnitz, 'are important. The question between us is whether the soul in itself is entirely empty, like tablets upon which nothing has been written (*tabula rasa*), according to Aristotle and the author of the *Essay*; and whether all that is there traced comes wholly from the senses and experience; or whether the soul originally contains the principles of several notions and doctrines, which the external objects only awaken on occasions, as I believe with Plato.'

The nature of the problem is well stated here; and Leibnitz sides with Plato in his solution of it. The main arguments by which he supports his view are those so often since repeated of the Universality and Necessity of certain truths, and of the incapacity of experience to furnish us with anything beyond a knowledge of individual cases. 'For if any event can be foreseen before it has been tried, it is manifest that *we* contribute something for our own parts.' *Ergo*, mere experience, it is argued, does *not* constitute all our knowledge. 'The senses, although *necessary* for all actual knowledge, are not sufficient to *give* us all of it; since the senses never can give but examples, that is to say, particular or individual truths. But all the examples which confirm a general truth, however numerous, do not suffice to establish the universal necessity of that truth; for it does not follow that that which has once occurred will always occur in the same way.'

Leibnitz continues: 'Whence it appears that necessary truths, such as we find in mathematics, and particularly in arithmetic and geometry, must have principles of which the proof does not depend upon examples, nor consequently upon the senses, although without the senses one would never have thought of them. So also logic, metaphysics, and morals are full of such truths, and consequently their proofs can only come from those internal principles which are called *innate*.'

Locke would perfectly have agreed with these premisses, but the conclusion he would rightly have rejected. That the senses alone could not furnish us with any general truth,

he taught as expressly as Leibnitz did; but this in no way affects his system, for he did not build his system upon the senses alone.

Leibnitz, however, seems to have been misled by Locke's language in the first definition of Reflection; for he says, 'Perhaps the opinions of our able author are not so far from mine as they appear to be. For, after having employed the whole of his first book against innate knowledge taken in a certain sense, he acknowledges in the beginning of the second that there are ideas which do not originate from the senses, but arise from Reflection. Now reflection is nothing but attention to that which passes within us; and *the senses do not convey to us what we already possess within ourselves*. Can it then be denied that there is much innate in the mind?'

The passage in italics is a curious instance of how the mind, preoccupied with its own opinions, sees them reflected in the expressions of others. Leibnitz here assumes the very point at issue; assumes that the mind has innate ideas which the senses cannot convey to it; and this assumption he supposes to be contained in Locke's words. Locke taught precisely the contrary. 'The mind is itself innate,' continues Leibnitz—(to which we reiterate our objection: innate in *what*? In itself? or in *us*? To say that it is innate in itself is a quibble; that it is innate in *us*, is a displacement of the question: no one in those days doubted that the mind of man was born in man—born with man; the question was, Are there any ideas born *with* the mind, or are all ideas acquired *by* the mind?) 'The mind is itself innate, and there are included in it substance, duration, change, action, perception, pleasure, and a thousand other objects of our intellectual ideas. . . . I have used the comparison of a block of marble which has certain veins in it, rather than a plain piece of marble such as the philosophers call *tabula rasa*; because, if the soul resembled tablets unwritten on, truths would be in *us* like the figure of Hercules is in the block of marble, when that marble may receive indifferently

one figure or another. But if there are veins in the marble which mark the figure of Hercules rather than any other figure, that marble would be more determinate, and the figure of Hercules would in some way be innate, although labour would be necessary to discover the veins, and to free them from their envelopment of marble. Thus are ideas and truths innate in us.'

This is an ingenious statement of the theory: unfortunately for it, the very existence of these veins in the marble is an assumption, and an assumption not made for the facilitating of inquiry, but simply for the proof of the theory assumed: it is an hypothesis framed for the sake of explaining—what?—the hypothesis itself! Ideas are first assumed to be innate; to prove this assumption, another assumption—the existence of innate ideas—is made; and the theory is complete.

The real force of Leibnitz's theory lies in his distinction between contingent and necessary truths, and in his position that experience alone could never furnish us with necessary truths: a position we shall have to examine closely when we come to Kant, who gave it its most authoritative form. The weakness of the theory, as propounded by Leibnitz, is that it makes no consistent distinction between empirical and *à priori* knowledge. Locke had shaken, if he had not shattered, the old assumption of Innate Ideas, by showing that they were deducible from Experience. Leibnitz attempted to meet this by assuming that all knowledge was in truth innate, and that what Locke supposed to be *given in Experience* was simply *evolved by Experience*.^{*} Herein the distinction between necessary and contingent disappears; if all knowledge is innate, all is developed, all stands on equal footing of certainty. Kant perceived the contradiction; but no one before Kant saw how it could be rectified.

^{*} 'Lorsque vous direz que les idées nous viennent de l'une ou l'autre de ces causes (observation and reflection), je l'entends de leur perception actuelle, car je crois d'avoir montré qu'elles sont en nous avant qu'on s'en aperçoive.'—*Nouveaux Essais*, liv. ii. ch. i. Comp. liv. i.

One passage will suffice to exhibit the contrast between Locke and Leibnitz (*Philalèthe* stands for Locke):—

'*Philalèthe*.—L'entendement ne ressemble pas mal à un cabinet entièrement obscur, qui n'aurait que quelques petites ouvertures pour laisser entrer par dehors les images extérieurs et visibles, de sorte que si ces images, venant à se peindre dans ce cabinet obscur, pouvaient y rester et y être placées en ordre, en sorte qu'on pouvait les retrouver dans l'occasion, il y aurait une grande ressemblance entre ce cabinet et l'entendement humain.

'*Théophile*.—Pour rendre la ressemblance plus grande, il faudrait supposer que dans la chambre obscure il y eût une toile pour recevoir les espèces, qui ne fût pas unie, mais diversifiée par des plis représentant les connaissances innées; que de plus cette toile étant tendue eût une manière de ressort ou force d'agir, et même une action ou réaction accommodée tant aux plis passés qu'aux nouveaux venus des impressions des espèces.'^{*}

A dispassionate review of the controversy, as conducted by the Sensationalists on the one hand, and the Animists on the other, discloses the incompleteness of both. Locke had but a vague and vacillating conception of the nature of the Understanding upon which the senses traced images, and of the processes by which sensation and ideation were effected. He was forced to admit innate faculties, but had no precise conception of what they were, nor of how they operated. Leibnitz properly objected that these naked faculties, 'les facultés sans quelque acte, en un mot, les pures puissances de l'école, ne sont que des fictions que la nature ne connaît point et qu'on obtient en faisant des abstractions.'

But Leibnitz himself, though vindicating the necessary co-operation of the Mind (the co-operation of subject with object, in Kant's phrase), had no precise conception, and was reduced to mere assumption. Because we are born with certain dispositions, and because Thought has certain

^{*} *Nouveaux Essais*, liv. ii. ch. xii.

recognisable conditions, he assumed that we are born with all dispositions, and that all knowledge is simply the awakening of slumbering ideas.

As a corrective to what was precipitate in Locke's psychology, as an energetic protest against what may be called sensuous experience (which disregards the 'organised experience' of the race, and thereby isolates the individual from Humanity), the criticism of Leibnitz was of signal service. In itself it was not of value. The false method on which he proceeded rendered psychological discovery hopeless.* Nevertheless there are certain incidental passages displaying extraordinary acuteness; and there is one contribution to Psychology which I consider of immense value, namely, the distinction between perception and apperception, or, as I have named them, Sense-Consciousness and Thought-Consciousness.† A thorough discussion of this subject ought to find a place in the prolegomena to every system of Psychology.

The problems relating to the origin and scope of Knowledge henceforth occupy the most prominent position in speculation. The solutions offered by Locke were widely accepted. In England and in France, they may be said to have constituted the principia of all theorising. But, as was noted in a previous chapter, they contained within them seeds of Idealism and Scepticism; and these we are now to contemplate in their developed forms.

* 'Son principe de la raison suffisante, très beau et très vrai en lui-même,' says D'ALEMBERT with pleasantry, 'ne paraît pas devoir être fort utile à des êtres aussi peu éclairés que nous le sommes sur les raisons premières de toutes choses.' — *Discours Préliminaire de l'Encyclopédie*.

† *Nouveaux Essais*, liv. ii. ch. i. §§.14-19. Compare *Physiology of Common Life*, ii. 74.

FOURTH EPOCH.

The problem of an external world discussed on psychological data.

CHAPTER I.

BERKELEY.

§ I. LIFE OF BERKELEY.

THERE are few men of whom England has better reason to be proud than of George Berkeley, Bishop of Cloyne. To extraordinary merits as a writer and thinker, he united the most exquisite purity and generosity of character; and it is still a moot-point whether he was greater in head or heart.

He was born on the 12th of March, 1684, at Kilcrin, in the county of Kilkenny; and educated at Trinity College, Dublin, where, in 1707, he was admitted as a Fellow. In 1709, he published his *New Theory of Vision*, which made an epoch in Science; and the year after, his *Principles of Human Knowledge*, which made an epoch in Metaphysics. After this he came to London, where he was received with open arms. 'Ancient learning, exact science, polished society, modern literature, and the fine arts, contributed to adorn and enrich the mind of this accomplished man. All his contemporaries agreed with the Satirist in ascribing

To Berkeley every virtue under heaven.

Adverse factions and hostile wits concurred only in loving,

admiring, and contributing to advance him. The severe sense of Swift endured his visions; the modest Addison endeavoured to reconcile Clarke to his ambitious speculations. His character converted the satire of Pope into fervid praise. Even the discerning, fastidious, and turbulent Atterbury said, after an interview with him, "So much learning, so much knowledge, so much innocence, and such humility, I did not think had been the portion of any but angels, till I saw this gentleman." * *

His acquaintance with the wits led to his contributing to the *Guardian*. He became chaplain and afterwards secretary to the Earl of Peterborough, whom he accompanied on his embassy to Sicily. He subsequently made the tour of Europe with Mr. Ashe; and at Paris met Malebranche, with whom he had an animated discussion on the ideal theory. In 1724, he was made Dean of Derry. This was worth eleven hundred pounds a year to him; but he resigned it in order to dedicate his life to the conversion of the North American savages, stipulating only with the Government for a salary of one hundred pounds a year. On this romantic and generous expedition he was accompanied by his young wife. He set sail for Rhode Island, carrying with him a valuable library of books, and the bulk of his property. But, to the shame of the Government, be it said, the promises made him were not fulfilled, and after seven years of single-handed endeavour, he was forced to return to England, having spent the greater part of his fortune in vain.

He was made Bishop of Cloyne in 1734. When he wished to resign, the King would not permit him; and being keenly alive to the evils of non-residence, he made an arrangement before leaving Cloyne, whereby he settled 200*l.* a year, during his absence, on the poor. In 1752, he removed to Oxford, where, in 1753, he was suddenly seized, while reading, with palsy of the heart, and died almost instantaneously.

* Sir J. MACKINTOSH.

Of his numerous writings we cannot here speak; two only belong to our subject: the *Principles of Knowledge*, and the *Dialogues of Hylas and Philonous*. We hope to remove some of the errors and prejudices with which his name is incrustated. We hope to show that, even in what are called his wildest moods, Berkeley was a plain, sincere, deep-thinking man, not a sophist, playing with paradoxes to display his skill.

§ II. BERKELEY AND COMMON SENSE.

All the world has heard of Berkeley's Idealism; and innumerable 'coxcombs' have vanquished it 'with a grin.' * Ridicule has not been sparing. Argument has not been wanting. Idealism has been laughed at, written at, talked at. It is ludicrous to notice the constant iteration of trivial objections which, trivial as they are, Berkeley had already anticipated. In fact, the critics misunderstood him, and then reproached him for inconsistency—inconsistency, not with *his* principles, but with *theirs*. They forced a meaning upon his words which he had expressly rejected; and then triumphed over him because he did not pursue their principles to the extravagances which would have resulted from them.

When Berkeley denied the existence of matter, he meant by 'matter' that unknown *substratum* the existence of which Locke had declared to be a necessary *inference* from our knowledge of qualities, but the nature of which must ever be altogether hidden from us. Philosophers had assumed the existence of Substance, i. e. of a *noumenon* lying underneath all *phenomena*—a substratum supporting all qualities—a *something* in which all accidents *inhere*. This unknown Substance, Berkeley rejects. It is a mere abstraction, he says. If it is unknown, unknowable, it is a figment, and I will none of it; for it is a figment worse than useless; it is pernicious, as the basis of all atheism. If by matter you

* 'And coxcombs vanquish Berkeley with a grin.'—POPE.

understand *that* which is seen, felt, tasted, and touched, then I say matter exists: I am as firm a believer in its existence as anyone can be, and *herein I agree with the vulgar*. If, on the contrary, you understand by matter that occult *substratum* which is *not* seen, *not* felt, *not* tasted, and *not* touched—that of which the senses do not, cannot, inform you—then I say I believe not in the existence of matter, and *herein I differ from the philosophers and agree with the vulgar*.

‘I am not for changing things into ideas,’ he says, ‘but rather ideas into things; since those *immediate objects of perception* which, according to you (Berkeley might have said, according to all philosophers), are only *appearances of things*, I take to be the real things themselves.

‘*Hylas*. Things! you may pretend what you please: but it is certain you leave us nothing but the empty forms of things, the *outside of which only strikes the senses*.

‘*Philonous*. What you call the empty forms and outside of things seem to *me* the very things themselves. . . . We both therefore agree in this, that we perceive only sensible forms; but herein we differ: you will have them to be empty appearances; I, real beings. In short, *you do not trust your senses; I do*.’

Berkeley is always accused of having propounded a theory which contradicts the evidence of the senses. That a man who thus disregards the senses must be out of his own was a ready answer; ridicule was not slow in retort; declamation gave itself elbow-room, and exhibited itself in a triumphant attitude. It was easy to declare that ‘the man who seriously entertains this belief, though in other respects he may be a very good man, as a man may be who believes he is made of glass; yet surely he hath a soft place in his understanding, and hath been hurt by much thinking.’*

Unfortunately for the critics, Berkeley did *not* contradict the evidence of the senses; in denying a *substratum*, he did

* REID: *Inquiry*.

not propound a theory at variance with the ordinary belief of mankind. His peculiarity is that he confined himself exclusively to the evidence of the senses. What the senses informed him of, that, and *that only*, would he accept. He held fast to the facts of consciousness; he placed himself resolutely in the centre of the instinctive belief of mankind: there he took his stand, leaving to philosophers the region of supposition, inference, and of occult substances.

The reproach made to him is really the reproach he made to philosophers, namely, that they would not trust to the evidence of their senses; that over and above what the senses told them, they imagined an occult something of which the senses gave no indication. ‘Now it was against this metaphysical phantom of the brain,’ says an acute critic, ‘this crotchet-world of philosophers, and against it alone, that all the attacks of Berkeley were directed. The doctrine that the realities of things were not made for man, and that he must rest satisfied with mere appearances, was regarded, and rightly, by him, as the parent of scepticism with all her desolating train. He saw that philosophy, in giving up the reality immediately within her grasp, in favour of a reality supposed to be less delusive, which lay beyond the limits of experience, resembled the dog in the fable, who, carrying a piece of meat across a river, let the substance slip from his jaws, while with foolish greed he snatched at the shadow in the stream. The dog lost his dinner, and philosophy let go her secure hold upon truth. He therefore sided with the vulgar, who recognise no distinction between the reality and the appearance of objects, and, repudiating the baseless hypothesis of a world existing unknown and unperceived, he resolutely maintained that what are called the sensible shows of things are in truth the very things themselves.’*

True it is that, owing to the ambiguities of language, Berkeley’s theory does seem to run counter to the ordinary

* *Blackwood’s Mag.* June 1842, p. 814, art. ‘Berkeley and Idealism:’ understood to have been written by Professor FERRIER.

belief of mankind, because by Matter men commonly understand the Seen, the Tasted, the Touched, etc.; therefore when the existence of Matter is denied, people naturally suppose that the existence of the Seen, the Tasted, and the Touched, is denied; never suspecting that Matter, in its philosophical sense, is the *not* seen, *not* tasted, *not* touched. Berkeley, it must be confessed, has insufficiently guarded against all ambiguity. Thus he says in one of the opening sections of his *Principles of Human Knowledge*, that 'It is indeed an opinion strangely prevailing amongst men that houses, mountains, rivers, and, in a word, all sensible objects, have an existence, natural or real, distinct from their being perceived by the understanding.' This is striking a false key-note. It rouses the reader to oppose a coming paradox. Yet Berkeley foresaw and answered the objections which Wimpey, Beattie, Reid, and others brought forward. He was not giving utterance to a caprice; he was not spinning an ingenious theory, knowing all the while that it was no more than an ingenuity. He was an earnest thinker, patient in the search after truth. Anxious, therefore, that his speculations should not be regarded as mere dialectical displays, he endeavoured on various occasions to guard himself from misapprehension.

'I do not argue against the existence of any one thing that we can apprehend either by sensation or reflection. *That the things I see with my eyes and touch with my hands do exist, really exist, I make not the least question. The only thing whose existence I deny is that which philosophers call Matter, or corporeal substance.* And in doing this there is no damage done to the rest of mankind, who, I dare say, will never miss it. . . .

'If any man thinks we detract from the reality or existence of things, he is very far from understanding what has been premised in the plainest terms I could think of. . . . It will be urged that thus much at least is true, viz. that we take away all corporeal substances. To this my answer is that, if the word *substance* be taken in the vulgar sense, for a

combination of sensible qualities, such as extension, solidity, weight, etc., this we cannot be accused of taking away.* But if it be taken in the philosophic sense, for the support of accidents or qualities without the mind; then, indeed, I acknowledge that we take it away, if one may be said to take away that which never had any existence, not even in the imagination.† But say what we can, some perhaps may be apt to reply, he will still believe his senses, and never suffer any arguments, however plausible, to prevail over the certainty of them. Be it so: assert the evidence of sense as high as you please, *we are willing to do the same.* That what I see, hear, and feel, doth exist, i.e. is perceived by me, I no more doubt than I do of my own being; *but I do not see how the testimony of sense can be alleged as a proof of anything which is not perceived by sense.*‡

After reading these passages (and more of a similar cast might be quoted), in what terms shall we speak of the works written to refute Idealism? Where was the acuteness of the Reids and Beatties, when they tauntingly asked why Berkeley did not run his head against a post, did not walk over precipices, etc., as, in accordance with his theory, no pain, no broken limbs could result?§ Where was philosophical acumen, when writers could imagine they refuted Berkeley by an appeal to common sense—when they contrasted the instinctive beliefs of mankind with the speculative paradoxes

* An answer to Dr. JOHNSON's peremptory refutation of BERKELEY, viz. kicking a stone: as if Berkeley ever denied that what we called stones existed!

† This is not well said. That substance was *imagined* to exist (as a support of accidents), Berkeley's argument supposes: it is against such an imaginary existence he directs his attacks. Perhaps he means that no *image* of substance could be formed in the mind; which no one disputes.

‡ *Principles of Human Knowledge*, §§ 35-37, 40.

§ 'But what is the consequence? I resolve not to believe my senses? I break my head against a post that comes in my way: I step into a dirty kennel; and after twenty such wise and rational actions I am taken up and clapt into a mad-house. Now I confess I had rather make one of those credulous fools whom nature imposes upon than of those wise and rational philosophers who resolve to withhold assent at all this expense.'—REID: *Inquiry*, ch. iv. § 20. This one passage is as good as a hundred.

belief of mankind, because by Matter men commonly understand the Seen, the Tasted, the Touched, etc.; therefore when the existence of Matter is denied, people naturally suppose that the existence of the Seen, the Tasted, and the Touched, is denied; never suspecting that Matter, in its philosophical sense, is the *not* seen, *not* tasted, *not* touched. Berkeley, it must be confessed, has insufficiently guarded against all ambiguity. Thus he says in one of the opening sections of his *Principles of Human Knowledge*, that 'It is indeed an opinion strangely prevailing amongst men that houses, mountains, rivers, and, in a word, all sensible objects, have an existence, natural or real, distinct from their being perceived by the understanding.' This is striking a false key-note. It rouses the reader to oppose a coming paradox. Yet Berkeley foresaw and answered the objections which Wimpey, Beattie, Reid, and others brought forward. He was not giving utterance to a caprice; he was not spinning an ingenious theory, knowing all the while that it was no more than an ingenuity. He was an earnest thinker, patient in the search after truth. Anxious, therefore, that his speculations should not be regarded as mere dialectical displays, he endeavoured on various occasions to guard himself from misapprehension.

'I do not argue against the existence of any one thing that we can apprehend either by sensation or reflection. *That the things I see with my eyes and touch with my hands do exist, really exist, I make not the least question. The only thing whose existence I deny is that which philosophers call Matter, or corporeal substance.* And in doing this there is no damage done to the rest of mankind, who, I dare say, will never miss it. . . .

'If any man thinks we detract from the reality or existence of things, he is very far from understanding what has been premised in the plainest terms I could think of. . . . It will be urged that thus much at least is true, viz. that we take away all corporeal substances. To this my answer is that, if the word *substance* be taken in the vulgar sense, for a

combination of sensible qualities, such as extension, solidity, weight, etc., this we cannot be accused of taking away.* But if it be taken in the philosophic sense, for the support of accidents or qualities without the mind; then, indeed, I acknowledge that we take it away, if one may be said to take away that which never had any existence, not even in the imagination.† But say what we can, some perhaps may be apt to reply, he will still believe his senses, and never suffer any arguments, however plausible, to prevail over the certainty of them. Be it so: assert the evidence of sense as high as you please, *we are willing to do the same.* That what I see, hear, and feel, doth exist, i.e. is perceived by me, I no more doubt than I do of my own being; *but I do not see how the testimony of sense can be alleged as a proof of anything which is not perceived by sense.*‡

After reading these passages (and more of a similar cast might be quoted), in what terms shall we speak of the works written to refute Idealism? Where was the acuteness of the Reids and Beatties, when they tauntingly asked why Berkeley did not run his head against a post, did not walk over precipices, etc., as, in accordance with his theory, no pain, no broken limbs could result?§ Where was philosophical acumen, when writers could imagine they refuted Berkeley by an appeal to common sense—when they contrasted the instinctive beliefs of mankind with the speculative paradoxes

* An answer to Dr. JOHNSON's peremptory refutation of BERKELEY, viz. kicking a stone: as if Berkeley ever denied that what we called stones existed!

† This is not well said. That substance was *imagined* to exist (as a support of accidents), Berkeley's argument supposes: it is against such an imaginary existence he directs his attacks. Perhaps he means that no *image* of substance could be formed in the mind; which no one disputes.

‡ *Principles of Human Knowledge*, §§ 35-37, 40.

§ 'But what is the consequence? I resolve not to believe my senses? I break my head against a post that comes in my way: I step into a dirty kennel; and after twenty such wise and rational actions I am taken up and clapt into a mad-house. Now I confess I had rather make one of those credulous fools whom nature imposes upon than of those wise and rational philosophers who resolve to withhold assent at all this expense.'—REID: *Inquiry*, ch. iv. § 20. This one passage is as good as a hundred.

of a philosopher, who expressly took his stand beside common sense against philosophers?

Men trained in metaphysical speculations may find it difficult to conceive the non-existence of an invisible unknowable substratum; but that the bulk of mankind find it almost impossible to conceive any such substratum is a fact which the slightest inquiry will verify. I once held a discussion which lasted an entire evening, in which by no power of illustration, by no force of argument, could the notion of this substance, apart from its sensible qualities, be rendered conceivable to my antagonist.

Berkeley, therefore, in denying the existence of matter, sided with common sense. He thought, with the vulgar, that matter was that of which his senses informed him; not an occult something of which he could have no information. The table he saw before him certainly existed: it was hard, polished, coloured, of a certain figure, and cost some guineas. But there was no *phantom table* lying underneath the *apparent table*—there was no invisible substance supporting that table. What he perceived was a table, and nothing more; what he perceived it to be, he would believe it to be, and nothing more. His starting-point was thus what the plain dictates of his senses, and the senses of all men, furnished.

§ III. IDEALISM.

The first step which a philosopher takes in any inquiry is a departure from Common Sense. Reflecting upon what his senses convey to him, he seeks an explanation of phenomena: and it is in proportion to the care with which he analyses the facts to be explained that he is usually supposed to be free from the mere extravagances of speculation. And yet Berkeley's analysis of the facts of Consciousness (as Consciousness is commonly understood by philosophers) has obtained for him the reputation of being one of the most extravagant of speculators.

This is the problem: our senses inform us of the existence

of certain sensible qualities, such as extension, colour, solidity, etc. But our reason tells us that these qualities must be qualities of something: they cannot exist as mere extension, colour, etc.: there must be something extended, coloured, etc. What is that something? The solution given by the philosophers was uniformly this: *what* that substance is, we can never know, because it lies beyond our apprehension; but we are forced to admit it, as a support to the qualities which we do apprehend, as a substance in which sensible qualities inhere. So that, deeply considered, the only reason for inferring the existence of Matter is *the necessity for some synthesis of attributes*.

Now, what did Berkeley? With very subtle perception of the difficulties of the problem, he boldly solved it by *making the synthesis a mental one*. Thus was matter wholly got rid of; it had no longer the excuse of being a necessary inference.

The nature of human knowledge is the first object of his inquiry. 'It is said that the faculties we have are few, and those designed by Nature for the support and pleasure of life, and not to penetrate into the inward essence and constitution of things. Besides, the mind of man, being finite, when it treats of things which partake of infinity, it is not to be wondered at if it run into absurdities and contradictions, out of which it is impossible it should ever extricate itself, it being of the nature of infinite not to be comprehended by that which is finite.'

This is plainly enough launched at Locke; but the worthy Bishop has no such disposition 'to sit down in quiet ignorance.' He suspects that 'we may be too partial in placing the fault originally in our faculties, and not rather in the wrong use we make of them.' He believes that God is too bountiful not to have placed knowledge within our reach of which he has given us the desire. Berkeley here forgets the lesson man was taught in Paradise, where the Tree of Knowledge was placed within his reach, but the fruits thereof forbidden him. 'Upon the whole,' continues Berkeley, 'I am inclined to think that the far greater part,

if not all, the difficulties which have hitherto amused philosophers, and blocked up the way to knowledge, are entirely owing to themselves. That we have first raised a dust, and then complain we cannot see.'

The pretension on which all philosophy is founded is here openly proclaimed. The consequences of Locke's doctrine are rejected; the premisses are retained. Berkeley's account of the origin of knowledge is the same as Locke's, only somewhat more explicitly defined. 'It is evident to anyone who takes a survey of the objects of human knowledge that they are either ideas actually imprinted on the senses or else such as are perceived by attending to the passions and operations of the mind; or, lastly, ideas formed by help of memory and imagination, either compounding, dividing, or barely representing those originally perceived in the aforesaid ways.'

Remark, firstly, that the *objects* of knowledge are said to be *ideas*. This has a paradoxical air to those unaccustomed to metaphysics, yet it is the simple expression of the facts of consciousness. All that the mind can be conversant about is obviously its ideas: we are conscious of nothing but the changes that take place in our minds. Whether these ideas are the *copies* or *representatives* of any *things*—whether changes in our state are to be attributed to any external cause: this is a question of philosophy—a question which common sense makes no scruple of begging. You see before you a flower, and you assume that an external thing resembling that flower exists, and that your sensation is produced by it, as a reflection in a mirror is produced by an object out of the mirror. But dive deeper into consciousness; interrogate yourself, and you will find that the comparison of the mirror is an assumption made only to explain the facts of consciousness, not given *in* those facts. Moreover, granting the assumption, you will then make the mind immediately conversant with its ideas *only*; for assuming that objects reflect themselves in the mirror, the mirror itself knows only the reflections: these it knows immediately; the objects it knows mediately, i.e. through the reflections. Thus is Berkeley

keeping rigorously to the facts of consciousness when he says that the 'objects of knowledge are ideas.'

Secondly, remark on Berkeley's use of the word *idea*, which stands both for sensation and idea. We cannot but regard this confusion of language as the cause of no little misapprehension of his doctrines. 'That neither our thoughts, nor passions, nor the ideas formed by our imagination, exist without the mind is what everybody will allow; and to me it is no less evident that the various sensations or ideas imprinted on the sense, however blended or combined together (*that is, whatever objects they compose*), cannot exist otherwise than in a mind perceiving them. . . . The table I write on, I say, exists, i.e. I see it, and feel it, and if I were out of my study, I should say it existed; meaning thereby that, if I was in my study, I might perceive it, or that some other spirit actually does perceive it. As to what is said about the existence of unthinking things, without any relation to their being perceived, that is to me perfectly unintelligible. Their *esse* is *percipi*; nor is it possible they should have any existence out of the minds or thinking things which perceive them.'

It is in this last paragraph that the kernel of his system lies. He had identified objects with ideas: having done so, it was easy to prove that objects could not exist without a perceiving mind *in* which to exist as ideas. 'For what are the objects but the things which we perceive by sense?' Realism assents: objects are what we perceive. 'And *what*, I pray you,' continues Berkeley, 'do we perceive besides our own ideas or sensations?' Realism hesitates; certainly the mirror has nothing immediately present to it besides the reflections. 'And is it not plainly repugnant,' triumphantly continues Idealism, 'that any one of these ideas, or any combination of them, should exist unperceived?' Realism has no answer to offer. It is in a dilemma from which there is apparently no escape.

The supposition of the existence of matter is founded on the doctrine of abstract ideas (against which Berkeley wages

war). 'For can there be a nicer strain of abstraction than to distinguish the existence of sensible objects from their being perceived, so as to conceive them existing unperceived? Light and colours, heat and cold, extension and figures—in a word, *the things we see and feel*—what are they but so many sensations, notions, ideas, or impressions on the sense; *and is it not impossible to separate, even in thought, any of these from perception?* For my part, I might as easily divide a thing from itself. I may indeed divide in my thoughts, or conceive apart from each other, those things which perhaps I never perceived by sense so divided. Thus I imagine the trunk of the human body without the limbs, or conceive the smell of a rose without thinking of the rose itself. So far I will not deny that I can abstract, if that be properly called abstraction which extends only to the conceiving separately such objects as it is possible may really exist, or be actually perceived asunder; but my conceiving or imagining power does not extend beyond the possibility of real existence or perception. Hence, as it is impossible for me to see or feel anything without an actual sensation of that thing, so it is impossible for me to conceive in my thoughts any sensible thing or object distinct from the sensation or perception of it. In truth, the object and the sensation are the same thing, and cannot therefore be abstracted from one another. . . .

'In a word, all the choir of heaven and furniture of earth—all those bodies which compose the mighty frame of the world—have not any subsistence without a mind: their *esse* is to be perceived or known; and consequently, so long as they are not actually perceived by me, or do not exist in my mind, or that of any other created spirit, they must either have no existence at all, or else subsist *in the mind of some eternal spirit*. . . .

'Though we hold indeed the objects of sense to be nothing else but ideas which cannot exist unperceived, yet we may not hence conclude they have no existence except only while they are perceived by us, since there may be some other spirit that perceives them, though we do not. Whenever

bodies are said to have no existence without the mind, *I would not be understood to mean this or that particular mind, but all minds whatsoever*. It does not therefore follow that bodies are annihilated and created every moment, or exist not at all during the intervals between our perception of them. . . .

'I am content to put the whole upon this issue: if you can but conceive it possible for one extended movable substance, or in general for any one idea, or anything like an idea, to exist otherwise than in a mind perceiving it, I shall readily give up the cause; I shall grant you its existence, though you cannot either give me a reason why you believe it exists, or assign any use to it when it is supposed to exist. I say the bare possibility of your opinion being true shall pass for an argument that it is so.

'But say you, surely there is nothing easier than for me to imagine trees in a park, or books in a closet, and nobody by to perceive them. I answer, you may so: there is no difficulty in it. But what is all this, I beseech you, more than *framing in your mind certain ideas* which you call books and trees, and at the same time *omitting to frame the idea of anyone perceiving them?*

'But do not *you yourself* perceive or think of them all the while? This therefore is nothing to the purpose: it only shows you have the power of imagining or framing ideas in your mind, but it does not show that you can conceive it possible the objects of your thought may exist without the mind. To make out this, it is necessary that you conceive them existing unperceived or unthought of, which is a manifest repugnancy. When we do our utmost to conceive the existence of external bodies, we are *all the while only contemplating our own ideas*.*

The last very remarkable passage must have been overlooked by the critic before mentioned, otherwise he would not have said that the 'knot which Berkeley loosened, but

* The foregoing passages are all taken from the *Principles of Human Knowledge*, §§ 5, 6, 8, 22, and 23.

which he certainly did not explicitly untie,' was to be resolved, for the first time, by the arguments he there brings forward. Berkeley had untied the knot, explicitly, satisfactorily; and that too in the same way as his critic.*

The distinction between *primary* and *secondary* qualities, Berkeley easily refutes, and shows that the same arguments which make the secondary qualities to be only affections of the mind may be applied to the primary qualities.

Having battered down almost every objection, trivial or serious, that could be offered, Idealism iterates its fundamental principle:—All our knowledge of objects is a knowledge of ideas; objects and ideas are the same. *Ergo*, nothing exists but what is perceived.

Realism espies a loophole. These ideas, with which we admit the mind to be solely conversant, are but the ideas (images) of certain things: these things exist independently of being perceived, though their ideas cannot. Berkeley foresaw this also. 'But, say you, though the ideas themselves do not exist without the mind yet there may be things like them whereof they are copies or resemblances, which things exist without the mind in an unthinking substance. I answer, *an idea can be like nothing but an idea*; a colour or figure can be like nothing but another colour or figure. Again, I ask whether those supposed originals or external things, of which our ideas are the pictures or representations, be themselves perceivable or no? If they are, then they are ideas, and we have gained our point; but if you say they are not, I appeal to anyone whether it be sense to assert a colour is like something which is invisible; hard or soft, like something which is intangible?' (Sect. 8.)

Realism is without a shadow of an answer. The philosophers are powerless against a theory so defended. No wonder that Idealism should have been pronounced irrefutable; the weapons were not forged, or, at any rate, were

* See the article in *Blackwood*, already cited, p. 817, *et seq.*

not in the armoury of Philosophy, which could successfully assail a fortress built on such a position. Dr. Reid's attempt we shall examine by and by.

As far as the simple facts of *adult* Consciousness extend, the analysis given by Berkeley is unimpeachable, unless we deny that Consciousness is immediately affected by sensations, and assert that it is immediately affected by external objects; but no metaphysician will take up this position, for it would lead him to maintain that Consciousness *is* nothing but these very sensations, which are produced in the organism by the action of external influences; and this would be getting rid of the substratum Mind, in order to rescue the substratum Matter. No metaphysician therefore ever could, logically, object to Berkeley's fundamental position; but only tried to elude it, or make it open into other issues.

The question whether Consciousness is anything over and above its acts, whether in Sensation and Ideation there is feeling *and* consciousness of feeling, and thinking *and* consciousness of thinking, or whether the two phrases express but one fact, may be considered as settled by modern psychologists, since Brown. Yet the old notion of a duplicate consciousness, attendant upon each act of consciousness (a feeling of feeling, to translate it into precise language), still crops up even in modern speculations. And it must continue to do so until the notion of Mind as an Entity is altogether banished. Thus in a striking article recently devoted to Mr. Mill's 'Examination of Hamilton,'* which clearly states the cause of much metaphysical confusion, and distinctly enough repudiates the old dualism, we read: 'In all knowledge there is a duality—the mind knowing and the thing known; but the mind always knows, and is never known; it is ever the subject of consciousness, and never the object of it. Because it is one, it cannot be the other.' I entirely agree with this, if instead of the 'mind knowing' be substituted 'the process of knowing:' a process can only be a process; but 'mind'—if conceived as an entity—may

* *Edinburgh Review*, July 1866.

have any imaginary powers we choose to assign it: a fictitious creation may have any fictitious attributes.

The real battlefield is, therefore, that of Dualism. Are there two distinct existences, Mind, on the one hand, and Matter, on the other; Mind in no respect allied with Matter, yet acted on by it, and representing it? The Idealist says, There is but one existence, Mind. Analyse the concept Matter, and you will discover that it is nothing but a synthesis of qualities; the qualities are sensations, the synthesis is mental.

The Realist, if consequent, will say, There is but one existence, Matter. Analyse your concept of Mind, and you will discover that it is nothing but a synthesis of qualities (states of consciousness); the qualities are activities of the vital organism; the synthesis is the organism.

The Sceptic agrees with both, and disagrees with both, and says: Your Matter is but a fleeting succession of phenomena, your Mind is but a fleeting succession of ideas.

The Dualist says: There is both Mind and Matter; the two are in essence distinct, and never can be brought into union; but the Mind has the capability of being acted on by Matter, the result of which is a representation within it of that which is without it; and it has, moreover, a power of acting on Matter, the result of which is—I don't exactly know what, but, at any rate, it is indicated by certain motions of Matter. If you ask me, How two existences thus essentially distinct, having no quality in common, can nevertheless act on each other? I answer: It is a mystery.

A mystery, no doubt. But Philosophy cannot be satisfied with phrases. It wants precise data. The dualistic hypothesis has the disadvantage of introducing two factors, without in the least assisting us. Idealism taking firm hold of one of these factors, Mind, explains phenomena quite as lucidly as Dualism with its two factors. Realism does the same with its one factor, Matter. Philosophy has to decide between them.

It has been well said by Mr. Herbert Spencer that the

denial of an external world 'consists of a series of dependent propositions no one of which possesses greater certainty than the single proposition to be disproved.'* If the grounds of our belief in an external world are questionable, what better grounds have we for the belief that the external world is a mere subjective phenomenon?

We are to settle whether it is a more plausible hypothesis that ideas are proximately produced in us by the mere Will of the Creator, whose will is effected by certain laws; or whether the ideas are proximately produced in us by external objects, which exist quite independently of us. This question, remember, is one which admits of no proof. It is not a question of fact, but of inference. It is not to be decided by common sense, but by analogical reasoning. Our knowledge extends no further than our ideas. Our inferences can be nothing more than inferences.

Berkeley has far better reasons for his inference than his critics generally imagine. He could not see the force of the argument which made Matter a necessary postulate. That we *could* have sensations and ideas without the presence of external objects is manifest from the fact that we *do* often have them, as in dreams and frenzies. If therefore matter is not always necessary for the production of ideas—if ideas can be sometimes produced without the presence of external objects—the pretended necessity, which alone forms the argument for the existence of matter, is done away with.

'But though,' he says, 'we might possibly have all our sensations without bodies, yet perhaps it may be thought easier to conceive and explain the manner of their production by supposing external bodies in their likeness rather than otherwise, and so it might at least be probable there are such things as bodies that excite ideas in our minds. But neither can this be said, for though we give the Materialists their external bodies, they, by their own confession, are never nearer the knowing how our ideas are produced, since they own themselves unable to comprehend in *what*

* *Principles of Psychology*, p. 36.

manner body can act upon spirit, or how it is possible it should imprint an idea in the mind.'

We have here the difficulty stated, which most Dualists (those who maintain the existence of spirit and matter, as distinct substances) have not been sufficiently alive to; and one which gave rise to Leibnitz's theory of pre-established harmony, and to Malebranche's theory of our seeing all things in God. This difficulty is indeed insuperable. It is easy to talk of the spirit being a mirror in which the universe reflects itself. Try for an instant to imagine a substance such as matter reflecting itself in, or acting upon, another substance having no one property in common with it. You cannot. Nor is this all: you cannot even imagine two substances so distinct as matter and spirit are defined to be.

Berkeley then is right in triumphing over Realism and Dualism. Right in saying that, if he were to accord them the existence of Matter, they could make no use of it. The subject would remain as dark as before: Matter throws no light on it. He maintains that our ideas are produced in us conformably with the laws of Nature. These laws have been ordained by God. To suppose that Matter is the mere occasional cause—the vehicle through which the laws of Nature operate—is gratuitous. The agency of the Creator is more simple and direct. He had no need of creating first laws, and afterwards Matter, through which these laws should come into effect. He created the laws alone; they act upon us as they were destined to act, and without the superfluous aid of Matter, which is a mere go-between.

Mr. Herbert Spencer has argued that Berkeley's hypothesis is a logical suicide; that the Universal Postulate, or the fundamental assumption which is itself the ultimate test of every speculation, namely, the inconceivability of the negative, is violated by Idealism. But an Idealist might reply: all that your Postulate implies is that Something external to my consciousness exists; Something which is not me, but affects me. I admit this. But I prove that

this external Something cannot be *per se* what it is to my consciousness, because I necessarily mingle my own nature with the objects which affect me; and I cannot separate the subjective from the objective elements, nor could Kant, though he tried it.

What then is granted? That Something exists. I cannot know this Something otherwise than under the subjective conditions of knowledge, I cannot therefore describe it, except through its influence on me. I am quite at liberty to suppose this Something to be only the Mode in which, and through which, the Deity affects me. You would also be at liberty to suppose it to be self-existent Matter; only that supposition leads to atheism, and is therefore convicted of error.

Now, as an inference—as an hypothesis—few thoroughly acquainted with the question, and with the data on which it was founded, can, we think, deny that this of Berkeley is many degrees superior to the hypothesis of Dualism. While most philosophers teach that there are two distinct eternal substances, which they name Spirit and Matter, Berkeley teaches that there is only *one* substance, viz. Spirit. With this one substance he can construct the world. According therefore to the fundamental rule in philosophy, that 'Entities or existences are not to be multiplied unless upon necessity' (*entia non sunt multiplicanda præter necessitatem*), the introduction of a second substance, Matter, is superfluous, or worse. Of its existence we have no proof whatever: it is a mere inference; it is inferred in order to explain the phenomena: and what phenomena? those of perception—i. e. the phenomena of the thinking substance.

If, then, Berkeley is more rigorous in his analysis of facts, and more ingenious and plausible in his hypothesis, than his antagonists suppose, shall we pronounce his Idealism satisfactory and true?

Hume said of it that it admitted of no answer, but produced no conviction. And there has been no final refutation of it. Yet, inasmuch as it is the irresistible belief of

mankind that objects are not dependent for their existence either upon our perception of them or upon the perception of any other mind—that objects exist *per se*, and would continue to exist if all minds were annihilated—Berkeley's theory never can produce conviction. Reid therefore was right in standing by this universal and irresistible belief. He was egregiously wrong, however, in supposing that he answered Berkeley by an appeal to this irresistible belief. This appeal, so loudly proclaimed by the Scotch school,* is rejected by several thinkers. The belief that the sun revolved round the earth was for many centuries irresistible, and false. Why may not Berkeley have been a metaphysical Copernicus, who, by rigorous demonstration, proved the belief of mankind in the existence of matter to be irresistible and false? Reid has no answer to give. He can merely say, 'I side with the vulgar;' but he might have given the same answer to Copernicus. Many illustrious men (Bacon among them) ridiculed the Copernican theory: but all the dogmatism, ridicule, and common sense in the world could not affect that theory. Why, we repeat, may not Berkeley have been a metaphysical Copernicus?

To prove that he was not, you must prove his reasoning defective; to prove this, you must show wherein his error lies, and not wherein his theory is at variance with your belief. All that your irresistible belief amounts to is that of a strong, a very strong, presumption against the truth of that which opposes it. Reid, in accepting this presumption as a proof, was in the right so long as Berkeley's reasoning

* Especially by Dr. Brown, who says that the 'sceptical argument for the non-existence of an external world, as a mere play of reasoning, admits of no reply.' The only reply he makes is that the belief is irresistible. HUME had already admitted that the belief was irresistible; the whole scope of his philosophy was to prove it both irresistible and false. How absurd then to appeal to the belief! KANT truly observes, in the preface to his *Kritik*, 'Admitting Idealism to be as dangerous as it really is, it would still remain a shame to philosophy and reason to be forced to ground the existence of an external world on the (mere) evidence of belief.' The more so as the fact of belief had never been questioned. The question was, Is the belief well grounded?

was not strong enough to overcome it: but singularly wrong in supposing that the presumption was a refutation.

Berkeley's main position is that the *objects of knowledge are ideas, and nothing but ideas*. The position is incontrovertible. The conclusion therefore: *all human knowledge can only be the knowledge of ideas, and of nothing but ideas*, is equally incontestible. Not less so the second conclusion: *objects being identified with ideas, and we having no idea of an object but as it is perceived, the ESSE of objects to us is PERCIPI*.

In admitting all this, what do we admit? Simply that human knowledge is not the 'measure of all things.' Objects to us can never be more than ideas; but are we the final measure of all existence? Because we can only *know* objects as ideas, is it a proper conclusion that objects only *exist* as ideas? Objects subtend certain angles to our consciousness; because we can only see them under these angles, is it logical to conclude that they are only these angles? For this conclusion to be rigorous, we must have some proof of our knowledge being the absolute standard of truth, instead of the standard of the relation things bear to our intellect.

The Idealist will say, 'If you cannot *know* anything beyond your ideas, why do you infer that there *is* anything?'—A question not easily answered. He will, moreover, say, 'I defy you to conceive anything existing unperceived. Attempt to imagine the existence of matter when mind is absent. You cannot, for in the very act of imagining it, you include an *ideal percipient*. The trees and mountains you imagine to exist away from any perceiving mind, what are they but the very ideas of *your* mind, which you transport to some place where you are not? In fact, to separate existence from perception is radically impossible. It is God's synthesis, and man cannot undo it.'*

To this one may answer, It is very true that, inasmuch as our knowledge of objects is identical with our ideas, we can never, by any freak of thought, imagine an object *apart from the conditions under which we know it*. We are forced by the

* See this argued in a masterly manner by the critic in *Blackwood*, before quoted.

laws of our nature to invest objects with the forms in which we perceive them.* We cannot therefore conceive anything which has not been subject to the laws of our nature, because in the very act of conception those laws come into play. But is it not a very different proposition to say, 'I cannot conceive things otherwise than according to the laws of my nature,' and to say, 'I cannot conceive things otherwise, consequently they cannot exist otherwise?' The Idealist here assumes that knowledge is absolute, not relative—that man is the measure of all things.

Perception is the *identity* of the ego and the non-ego—the relation of two terms, the *tertium quid* of two united forces; as water is the identity of oxygen and hydrogen. The ego can never have any knowledge of the non-ego in which it (the ego) is not indissolubly bound up; as oxygen can never unite with hydrogen to form water without merging itself and the hydrogen in a *tertium quid*. Let us suppose the oxygen to be a process of consciousness, i. e. a feeling of changes. It would attribute the change *not* to hydrogen, which is necessarily hidden from it, *but to water*, the only form under which hydrogen is known to it. In its consciousness it would find the state named water, which would be very unlike its previous state; and it would suppose that this state, so unlike the previous one, was a representation of that which caused it. We say then that, although the hydrogen can only exist for the oxygen (in the above case) in the identity of both as water, this is no proof that hydrogen does not exist under some other relations to other gases. In like manner, although the non-ego cannot

* 'When in perception,' says SCHELLING, 'I represent an object, *object and representation are one and the same*. And simply in this our inability to discriminate the object from the representation during the act lies the conviction which the common sense of mankind has of the reality of external things, although these become known to it only through the representations.'—*Ideen zu einer Philos. der Natur*, Einleitung, p. xix. (quoted by Sir W. HAMILTON.) This is indisputable, but it is only saying that our knowledge of things is subject to the conditions of knowledge. Because we cannot discriminate between the object and the representation, it is no proof that there is no distinction between them.

exist in relation to mind otherwise than in the identity of the two (perception), this is no sort of proof that it does not exist in relation to other beings under quite different conditions.

In conclusion, we admit, with the Idealists, that all our *knowledge* of objects consists in our ideas. But we cannot admit that all existence is limited by our knowledge, merely on the ground that, when we could conceive anything existing, we are forced to conceive it in accordance with the laws of our conceptive faculties. We admit, with the Idealists, that our knowledge is *subjective*. But we do not admit that what is true subjectively is true objectively. We believe in the existence of an external world quite independent of any percipient; the arguments by which Idealism would controvert it are vitiated by the assumption of knowledge being a criterion of existence. Idealism agrees with Realism in placing reliance on the evidence of consciousness; it argues however that, inasmuch as our *knowledge* is confined to ideas, we have no right to assume anything beyond ideas. Yet it also is forced to assume something as the cause of ideas: this cause it calls the Will of the Creator; and this is an assumption. The real dispute therefore should be concentrated on this point: Which assumption is more consonant with our irresistible belief—the assumption of external objects independent of our sensations; or the assumption of a providential scheme, in which our sensations are the effects of the operation of Divine laws, and in which objects play no part? The answer cannot be dubious. The former assumption, as more consonant with universal belief, must be accepted.

Berkeley, we believe, failed as a metaphysical Copernicus, because the assumption which he opposed to the universal belief was less consonant with that belief than the assumption it was meant to replace. Had Copernicus not started an hypothesis which, however contradictory to the senses, nevertheless afforded a much better explanation of celestial phenomena than was possible on the old hypothesis, he

would not have been listened to. Berkeley's assumption, if conceded, carries him no deeper than the old assumption. Idealism explains nothing. To accept it would be to renounce a universal belief for a mere hypothesis.

Berkeley was a deep and remarkable thinker; and he failed, as the greatest thinkers of all times have failed, not because he was weak, but because Ontology is impossible.

Those who have followed the course of this History with attention will not fail to observe how Berkeley's Idealism is at bottom the much decried system of Spinoza, who taught that there was but one essence in the universe, and that one Substance. Berkeley also taught that there was but one, and that one Thought. Now call this One what you will, the result is the same: speculatively or practically. There may be certain degrading associations attached to the idea of substance; or certain exalted associations attached to that of spirit. But what difference can our associations make with respect to the real nature of things?

One great result of Berkeley's labours was the lesson he taught of the vanity of ontological speculations. He paved the way to that Scepticism which is the terminal morass of all consistent Metaphysics.

FIFTH EPOCH.

The arguments of Idealism carried out into Scepticism.

CHAPTER I.

HUME.

§ I. LIFE OF HUME.

MR. BURTON'S ample and excellent biography* would furnish materials for a pleasant memoir, could we here afford the requisite space; but we must content ourselves with referring the reader to that work, merely recording the principal dates and events of an uneventful life.

David Hume was born at Edinburgh, April 26, 1711; the youngest child of a poor laird of good blood. He was an orphan before his education was completed. His guardians first thought of the profession of law, but, owing to his repugnance, he was absolved from that career, and was placed in a Bristol counting-house, where he did not remain long. On coming of age, he found himself in possession of a small property, too small for honourable subsistence in England, but large enough for France; and he went to Rheims; from thence to La Flèche, where the Jesuits' college and library were great attractions to the studious youth; there he passed several years in solitary study.

A great ambition moved him: he was to accomplish for

* JOHN HILL BURTON: *The Life and Correspondence of David Hume, from the Papers bequeathed to the Royal Society of Edinburgh*, 2 vols.

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moral science a revolution analogous to that which Bacon had effected in physical science. His *Treatise on Human Nature*, which appeared in 1737, was announced as an attempt to introduce the Experimental Method into reasonings on moral science. It is needless to point out the profound misconception of the Experimental Method here implied; nor is it necessary to show at any length that there was no novelty whatever in Hume's attempt to test Psychology by experience.

In 1741 appeared the first part of his immortal *Essays*; and in 1747 he accompanied General St. Clair, as secretary, in the embassy to Vienna and Turin. In 1752 he published his *Political Discourses* and the *Inquiry concerning the Principles of Morals*. The appointment of Librarian to the Faculty of Advocates in Edinburgh—the salary of which he generously gave to the poor poet Blacklock—placed at his disposal a fine collection of books; and this suggested the undertaking which has long been held his greatest title to fame—the *History of England*, the first volume of which appeared in 1754.

For the literary historian there are two piquant episodes in the life of Hume. The first is the ovation given to the philosopher in Paris, whither he had accompanied the Marquis of Hertford; the second is his friendship and quarrel with Rousseau. Both are copiously narrated by Mr. Burton.

Hume died in the spring of 1776, leaving a name imperishable in our literature, although it is a name attached to opinions which have roused, and will continue to rouse, vehement opposition. In considering this it should never be forgotten that so wise and good a man as Adam Smith could publicly write of him, 'Upon the whole, I have always considered him, both during his lifetime and since his death, as approaching as nearly to the idea of a perfectly wise and virtuous man as perhaps the nature of human frailty will permit.'

§ II. HUME'S SCEPTICISM.

The marvellous acuteness and subtlety of Hume have never been denied. His influence upon speculation has been aided as much by the alarm his doctrines excited as by the ingenuity with which they were upheld. If Berkeley met with no refuters, Hume could meet with none. Antagonists have generally been compelled to admit that the sceptical reasoning was unanswerable.

Locke had shown that all our knowledge was dependent upon experience. Berkeley had shown that we have *no* experience of an external world independent of perception; nor could we have any such experience. He pronounced Matter to be an abstraction. Hume took up the line where Berkeley had cast it, and flung it once more into the deep sea, endeavouring to fathom the mysteries of Being. Probing deeper in the direction Berkeley had taken, he found that not only was Matter an abstraction, Mind was an abstraction also. If the occult substratum, which men had inferred to explain material phenomena, could be denied, because not founded on experience; so also, said Hume, must we deny the occult substratum (Mind) which men have inferred to explain mental phenomena. All that we have any experience of is impressions and ideas. The substance *of* which these are supposed to be impressions is occult—is a mere inference; the substance *in* which these impressions are supposed to be is equally occult—is a mere inference. Matter is but a collection of impressions. Mind is but a succession of impressions and ideas.*

Thus was Berkeley's dogmatic Idealism converted into Scepticism. Hume, speaking of Berkeley, says, 'Most of the writings of that very ingenious philosopher form the best lessons of scepticism which are to be found either among

* LOCKE had already shown that we are as ignorant of spirit as of substance. We know mind only in its *manifestation*; we cannot know it *per se* as a *substratum*. HUME's argument, therefore, had a firm foundation in the current philosophy. He only concluded from admitted premisses.

the ancient or modern philosophers, Bayle not excepted. He professes, however, in his title-page (and undoubtedly with great truth), to have composed his book against the Sceptics, as well as against the Atheists and Free-thinkers. But that all his arguments, though otherwise intended, are in reality merely sceptical appears from this, that they admit of no answer, and produce no conviction.*

Remark also that Hume's scepticism, though it reduces Philosophy to a singular dilemma,—namely, that of either refuting the sceptical arguments, or of declaring itself and its pretensions to be vain and baseless,—nevertheless affects in no other way the ordinary judgments or actions of mankind. Much stupid ridicule and frivolous objection have been, and probably will continue to be, brought against Hume. Reid, from whom one might have expected something better, is surprised at Hume's pretending to construct a science upon human nature, 'when the intention of the whole work is to show that there is neither human nature nor science in the world. It may perhaps be unreasonable to complain of this conduct in an author who neither believes his own existence nor that of his reader; and therefore could not mean to disappoint him, or laugh at his credulity. Yet I cannot imagine that the author of the *Treatise on Human Nature* is so sceptical as to plead this apology. He believed, against his principles, that he should be read, and that he should retain his personal identity, till he reaped the honour and reputation justly due to his metaphysical acumen.' He continues further in this strain, dragging in the old error about Pyrrho having inconsistently been roused to anger by his cook, 'who probably had not roasted his dinner to his mind,' and compares this forgetfulness to Hume's every 'now and then relapsing into the faith of the vulgar.'*

If this was meant for banter, it is very poor banter; if for argument, it is pitiable. But since such arguments appeared valid to a thinker of Reid's reputation, it is reasonable to suppose that inferior men may also receive them as

* *Inquiry*, introd. i. § 5.

conclusive. Hume shall therefore be allowed to speak for himself; and he shall speak in the language of that very *Treatise on Human Nature* to which Reid alludes:—

'Should it be here asked me whether I sincerely assent to this argument which I seem to take such pains to inculcate, and whether I be really one of those sceptics who hold that all is uncertain, and that our judgment is not in *any* thing possessed of *any* measures of truth and falsehood, I should reply that this question is entirely superfluous, and that neither I nor any other person was ever sincerely and constantly of that opinion. Nature, by an absolute and uncontrollable necessity, has determined us to judge as well as to breathe and feel; nor can we any more forbear viewing certain objects in a stronger and fuller light upon account of their customary connection with a present impression than we can hinder ourselves from thinking as long as we are awake, or seeing the surrounding bodies when we turn our eyes towards them in broad sunshine. Whoever has taken the pains to refute the cavils of this *total* scepticism has really disputed without an antagonist, and endeavoured by arguments to establish a faculty which *Nature* has antecedently implanted in the mind, and rendered unavoidable.

'My intention then in displaying so carefully the arguments of that fantastic sect is only to make the Reader sensible of the truth of my hypothesis that all our reasonings concerning causes and effects are derived from nothing but custom; and that belief is more properly an act of the sensitive than of the cogitative part of our natures. . . . If belief were a simple act of the thought without any peculiar manner of conception, or the addition of force and vivacity, it must infallibly destroy itself, and in every case terminate in a total suspense of judgment. But as experience will sufficiently convince anyone that, although he finds no error in my arguments, yet he still continues to believe and think and reason as usual, he may safely conclude that his reasoning and belief is some sensation or peculiar manner of

conception, which 'tis impossible for mere ideas and reflections to destroy.*

It is an illustration of the want of candour displayed by Hume's opponents that they never quoted this very significant and explicit passage; indeed I never remember to have seen the passage quoted by anyone. Let us ask, what does the foregoing declaration amount to, if not to the boasted 'common-sense view' that our belief in the existence of matter is instinctive, fundamental? Does not Dr. Brown's admission that the sceptical argument is unanswerable as a mere play of reasoning concede all that Hume requires? Does not Dr. Brown's conclusion that we are thrown upon 'irresistible belief' as our only refuge against scepticism equally accord with Hume's explicit declaration that we *do* believe, and cannot help believing, though we can give no reason for the belief?

'Thus the sceptic,' Hume adds a little further on, 'still continues to reason and believe, even though he asserts that he cannot defend his reason by reason; and by the same rule he must assent to the principle concerning the existence of body, though he cannot pretend by any arguments of philosophy to maintain its veracity. *Nature has not left this to his choice*, and has doubtless esteemed it an affair of too great importance to be trusted to our uncertain reasonings and speculations. We may well ask, *what causes induce us to believe in the existence of body?* but 'tis in vain to ask *whether there be body or not?* that is a point which we must take for granted in all our reasonings.'

After this, let no more be said about Hume's practical inconsequences. Locke before him had clearly enough seen and signalled the impotence of the attempt to penetrate beyond phenomena, and had, with his usual calm wisdom, counselled men to 'sit down in quiet ignorance.' He knew the task was hopeless; he knew also that it was trivial. God has given us the means of knowing all that directly concerns us with a certainty which suffices for our wants.

* *Human Nature*, part iv. § i. p. 250.

With that, reasonable men will be content. If they seek more, they seek the impossible; if they push their speculations deeper, they end in scepticism. It was the philosophical mission of Hume (to adopt a phrase in vogue) to show how inevitably all such speculations, if consistent, ended in scepticism.

'Men,' he says, 'are carried by a natural instinct or prepossession to repose faith in their senses. When they follow this blind and powerful instinct of nature, they always suppose the *very images* presented to the senses to be the external objects, and *never entertain any suspicion that the one are nothing but representatives of the other*. But this universal and primary opinion of all men is soon destroyed by the slightest philosophy, which teaches us that nothing can ever be present to the mind but *an image or perception*. So far then we are necessitated by *reasoning to contradict the primary instincts of Nature*, and to embrace a new system with regard to the evidence of our senses. But here philosophy finds herself extremely embarrassed, when she would obviate the cavils and objections of the sceptics. She can no longer plead the infallible and irresistible instinct of nature, for that led us to quite a different system, which is acknowledged fallible, and even erroneous; and to justify this pretended philosophical system by a chain of clear and convincing argument, or even any appearance of argument, exceeds the power of all human capacity.

'Do you follow the instinct and propensities of nature in assenting to the veracity of the senses? But these lead you to believe that the *very perception or sensible image is the external object*—(Idealism).

'Do you disclaim this principle in order to embrace a more rational opinion, that the perceptions are only *representations* of something external? You here depart from your natural propensities and more obvious sentiments; and yet are not able to satisfy your reason, which can never find any convincing argument from experience to prove that the perceptions are connected with external objects'—(Scepticism).

This is the dilemma to which Philosophy is reduced: out of it there is no escape; and Hume deserves the gratitude of mankind for having brought Philosophy to this pass. Mankind, however, has paid him with reprobation. As the whole course of our History has been occupied in tracing the inevitable result of all Philosophy to be precisely this, our readers will be prepared for a different appreciation of Hume. Let us therefore endeavour to define the nature of this scepticism, which has caused such great alarm. Scepticism, meaning doubt, and being frequently used to signify religious doubt, has alarming associations attached to it. To call a man a sceptic is to call him a heretic. And, unfortunately for Hume's philosophical reputation, he was a sceptic in Theology as well as in Philosophy, and mankind have consequently identified the former with the latter.

Now, philosophical scepticism means a doubt as to the validity of Philosophy;—in other words, a doubt only on one particular subject. If I accept the consequences to which the doctrine of Hume leads me, am I forced to suspend my judgment, and to pronounce *all* subjects uncertain? or am I only to pronounce *some* subjects uncertain? The latter is clearly the only opinion I can entertain. *What* then are the questions on which I must be content to remain in darkness? Locke, no less than Hume, has told us: All which relate to Ontology—which pretend to discuss the nature and essences of things.

This scepticism, the reader must acknowledge, has nothing very alarming in it,—except to Philosophy. It is maintained by the vast majority of thinking men—some from conviction, others from a vague sense of the futility of ontological speculation. Only the bad passions roused in discussion could pretend to confound it with a religious heresy. Scepticism indicates the boundaries of inquiry. It leads us from impossible attempts to fly, and instructs us how securely we may run. It destroys Metaphysical Philosophy only to direct all our energies towards Positive Philosophy. In the words of Goethe, 'Let us not attempt to demonstrate what cannot be demonstrated! Otherwise we shall make our miserable

deficiencies more glaring to posterity by our so-called works of knowledge.'

Hume was a sceptic; and, consequently, early in life ceased devoting his marvellous acuteness to any of the questions agitated in the schools. His *Essays* and his *History* were excellent products of this change of direction; and although he did devote a portion of the *Essays* to Philosophy yet it was but a portion, and one which gave a more popular and elegant exposition of the principles of his first work.

§ III. HUME'S PSYCHOLOGY.

It was clearly seen by Hume that the failure of Philosophy to compass its ambitious aim was owing to a false conception of the scope of human intellect. 'The only method,' he says, 'of freeing learning at once from these abstruse questions is to inquire seriously into the nature of human understanding, and show from an exact analysis of its powers and capacity that it is by no means fitted for such remote and abstruse subject.'* The sceptical issue from his analysis could only be escaped by proving some flaw in the analysis.

All our mental furniture being reduced to Impressions (even Ideas being simply the feeble copies of the livelier Impressions), the philosopher may 'banish all that jargon which has so long taken possession of metaphysical reasonings, and drawn such disgrace upon them. All ideas, especially abstract ones, are naturally faint and obscure. The mind has a slender hold of them: they are apt to be confounded with other resembling ideas; and when we have often employed any term, though without a distinct meaning, we are apt to imagine that it has a determinate idea annexed to it. On the contrary, all impressions, that is, all sensations, either outward or inward, are strong and sensible; the limits between them are more exactly determined; nor is it easy to fall into any error or mistake regarding them. When we entertain, therefore, any suspicion that a philosophical term is employed without any meaning or idea (as is but too

* *Essays*, sect. i.

frequent), we need but inquire *from what impression is that idea derived?* And if it be impossible to assign any, this will serve to confirm our suspicion.*

In other words, a conception which we are unable to reduce to sensible elements can have no objective reality. If it is a *relation*, we must exhibit the related *terms*. If it is a *symbol*, we must exhibit the facts which are converted into signs. Hume used the word Impressions in this wide sense: 'all our more lively perceptions, when we hear, or see, or feel, or love, or hate, or desire, or will;' a somewhat unfortunate ambiguity, and one that was not cleared up by his distinction of Ideas as the same Impressions in a less vivid form. Nevertheless, although there was deficient precision in his views, he was, I think, on the track of true psychological discovery. That he had not clearly thought out the distinctions between faculties and sensations, or the real relation between sensations and ideas, is obvious enough. Thus in treating of the question of Innate Ideas, he says: 'If innate be equivalent to natural then all the perceptions and ideas of the mind must be allowed to be innate or natural. . . . If by innate be meant contemporary to our birth the dispute seems to be frivolous; nor is it worth while to inquire at what time thinking begins, whether before, at, or after, our birth.' [What a complete misapprehension of the reach of the dispute!] 'Again, the word *idea* seems to be commonly taken in a very loose sense, even by Locke himself, as standing for any of our perceptions, our sensations, and passions, as well as thoughts. Now, in this sense, I should desire to know what can be meant by asserting that self-love, or resentment of injuries, or the passion between the sexes, is not innate? But admitting these terms, *impressions* and *ideas*, in the sense above explained, and understanding by *innate* what is original or copied from no precedent perception, then may we assert that all our impressions are innate, and our ideas are not innate.' In so acute a thinker, such confusion is remarkable.

* *Essays*, sect. ii.

Hume perceived the difficulty of recognising Mind as an Entity; but his imperfect acquaintance with Science prevented him from recognising the other alternative, that Mind might be a Function. In denying a mental *substratum* analogous to the *substratum* imagined to underlie the qualities of matter, he was left in a state of absolute scepticism. He gave a logical unity to consciousness, and supposed that this logical unity was all that men meant when they spoke of real unity. A metaphysician might reasonably object that the reality of Mind was implied in the fact of impressions: an implied something which is impressed, a something which feels and ideates: that something is the mental substratum. A biologist would make a somewhat similar reply. Hume says, 'An impression first strikes upon the senses . . . of this impression there is a copy taken by the mind, which remains after the impression ceases; and this we call an idea.' This is preposterous and vague: it introduces an hypothetical Mind (whose existence he denies) acting like a copying machine; and when we come to learn what this Mind is, we find it is 'nothing but a *heap or collection* of different perceptions united together by certain relations, and supposed, though falsely, to be endowed with perfect simplicity and identity.*' What should we say to a philosopher who asserted that a locomotive was *nothing but a succession of spaces passed through*, and denied that there was any motor, any real object, passing through the described spaces?

If Mind is a series of impressions, or, as modern psychologists say, a succession of states of Consciousness, what is their connecting link? Between any two states there must be an interval, however brief, in which no object occupies Consciousness. During this interval does Consciousness vanish, to reappear with the next state? Is there no continuity? The metaphysician answers: Yes, the mind itself continues and connects in one synthesis all its manifestations. In the intervals between two acts, it is in the static condition; in the several manifestations, it is in the dynamic condition.

* *Treatise on Human Nature*.

The biologist answers: Consciousness, being a vital process, not an Entity, has its synthesis in the continuity of the vital conditions. Just as a muscle continues to exist, as muscle, in the interval between two contractions, so does the nervous mechanism, of which Consciousness is a function, continue to exist in the interval between two acts of Consciousness; but neither Contractility nor Sensibility exist independently of their tissues; nor can they be manifested when the vital properties are exhausted.

The metaphysician would assuredly reject aid of *this* kind, even against Hume. He would assert that the reality of the mental entity is testified by Consciousness, and is proved by the fact that we say My body—an assurance that my body is not *me*.

Here the biologist would remark that the testimony of Consciousness needs sifting by analysis. If we say, My body, not less undeniably do we say, My mind. Indeed the notion of Self is a reflective notion, the genesis of which no psychologist has yet clearly traced.

Hume certainly had no clue to it. His assertion that the mind was nothing but a series of impressions, was less the result of psychological investigation than of logical deduction. The arguments by which Berkeley had destroyed the notion of a substantive Matter were turned with equal force against the notion of a substantive Mind. But, nevertheless, this sceptical suggestion, once thrown out, could not fail to act like a ferment. It was a step towards the biological solution; a step which could not be carried far until Biology had from its side also approached the subject.

§ IV. HUME'S THEORY OF CAUSATION.

It is customary to speak of 'Hume's theory of Causation,' and to bestow no inconsiderable acrimony upon him on its account. But, in the first place, the theory is not peculiarly his; in the second place, his application of it to the question of Miracles, which has excited so much vehement controversy,

reduces itself to 'this very plain and harmless proposition, that whatever is contradictory to a complete induction is incredible. That such a maxim as this should be either accounted a dangerous heresy or mistaken for a recondite truth speaks ill for the state of philosophical speculation on such subjects.'*

The theory may be thus briefly stated. All our *experience* of causation is simply that of a constant succession. An antecedent followed by a sequent—one event followed by another: this is all that we experience. We attribute indeed to the antecedent a *power* of producing or causing the sequent; but we can have no experience of such a power. If we believe that the fire which has burned us will burn us again, we believe this from habit or custom; not from having perceived any *power* in the fire. We believe the future will resemble the past, because custom has taught us to rely upon such a resemblance. 'When we look about us towards external objects, and consider the operation of causes, we are never able in a single instance to discover any power or necessary connection—any quality which binds the effect to the cause, and renders the one an infallible consequence to the other. We only find that the one does actually in fact follow the other. The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the outward senses. The mind feels no sentiment or inward impression from this succession of objects; consequently there is not, in any single instance of cause and effect, anything which can suggest the idea of power or necessary connection.'† This is the whole of his theory. His explanation of our belief in power, or necessary connection, is that it is a matter of habit.

I know not whether Hume ever read Glanvill's *Scepsis Scientifica*. The title was one to attract him. At any rate, Glanvill had clearly enough stated Hume's theory, e. g. 'All knowledge of causes is deductive; for we know of none by

* MILL: *System of Logic*, vol. ii. p. 183.

† *Essays*, sect. vii.

simple intuition, but through the mediation of their effects. So that we cannot conclude anything to be the cause of another *but from its continually accompanying it*; for the *causality* itself is *insensible*. Malebranche had also anticipated him; and so had Hobbes. The language, indeed, of the latter is so similar to the language employed by Hume that I agree with Dugald Stewart in suspecting Hume to have borrowed it from Hobbes. 'What we call experience,' says Hobbes, 'is nothing else but remembrance of what antecedents have been followed by what consequents. . . . No man can have in his mind a conception of the future, for the future is not yet; but of our conceptions of the past we make a future, or rather call past future relatively. Thus, after a man has been accustomed to see like antecedents followed by like consequents, whensoever he seeth the like come to pass to anything he had seen before, he looks there shall follow it the same that followed then.'

This theory of Causation has been hotly debated, partly because of the 'consequences' which some have seen, with alarm, to be deducible from it (for opinions are judged of more by their supposed consequences than by their reasoned truth); partly also because Hume has not stated it with the clearness which prevents misunderstanding. It is only to the latter point we can here attend.

When Hume asserts that experience gives no intimation of any *connection* between two events, but only of their *invariable conjunction*—when he says that the mind cannot perceive a causal nexus, but only an invariableness of antecedence and sequence, he is contradicted, or seems to be, by the consciousness of his readers. They declare that, over and above the fact of sequence, there is always an intimation of *power* given in every causation, and this it is which distinguishes causal from casual sequence,—connection from mere conjunction. The fire burns paper because there is some power in the fire to effect this change. Mere antecedence, even if invariable, cannot be sufficient, or else day would be the cause of night, the flash of lightning would be the cause

of the thunder-peal. Swallows fly close to the earth some little while before the rain falls; but no one supposes the flight of the swallows causes the fall of the rain. In every case of causation there must be an element of power—a capacity of producing the observed change—a nexus of some kind, over and above the mere juxtaposition of bodies. If diamond will cut glass, it has a power to do so; the sharpest knife is without this power.

So reason Hume's antagonists. Nor do I think they are finally answered by resolving the idea of power into mere invariableness of antecedent and sequent; for they may reply that the 'invariableness' itself is deduced from the idea of power: we believe the fire will invariably burn the paper because it has the power to do so, because there is a real nexus between fire and the combustion of paper; only on such a belief can our expectation of the future resembling the past be securely founded.

The ordinary belief of mankind in the existence of something more than mere antecedence and consequence is therefore a fact. This fact Hume and others admit. Because they cannot perceive the power, they declare that we have no right to believe in it. Hume insists upon the impossibility of our perceiving power—of our perceiving any necessary connection between two events. But, say those who oppose this theory, 'Although we cannot *perceive* the power, we are forced to *believe* in it; and this belief is not a matter of custom, but is given in the very facts of consciousness. We perceive that *some power* is at work producing effects; the *precise nature* of this power, indeed, we cannot perceive, because we never can know things *per se*. When a spark ignites gunpowder, we perceive a power in the spark to ignite gunpowder: *what* that power is, we know not: we only know its effects. But our ignorance is equally great of the gunpowder: *what* it is, we know not; we only know its appearances to us. It might as well be said that we believe in the gunpowder from custom (since we really know nothing of it *per se*) as that we believe in the power of the spark to

ignite gunpowder from custom, since we really know nothing of powder *per se*. We know nothing *per se*.'

I have marshalled the arguments, with as much force as I could muster, into so small a field, in order to bring into appreciable distinctness the source of the opposition to Hume's theory on the part of many who have no doctrinal distrust towards it. Before attempting an elucidation of the difficulty, it will be needful to consider the grounds of our belief in causation. As it is a fact that all men believe in some power involved in every causal act, we have to ask, Is that belief well founded?

Two schools at once present themselves. The one (that of Hume) declares that the belief has no good grounds; it is a matter of custom. If I believe the sun will rise to-morrow, it is because it has always risen. If I believe that fire will burn in future, it is because it has always burned. From habit I expect the future will resemble the past: I have no proof of it.

The other school declares that this belief in causation 'is an intuitive conviction that the future will resemble the past.' This is the language of Reid and Stewart. Dr. Whewell would have us admit the belief as a fundamental idea—a necessary truth independent of and superior to all experience.

Both explanations are questionable. Custom or habit can essentially have nothing whatever to do with it, because our belief is as strong from a single instance as from a thousand. 'When many uniform instances appear,' says Hume, 'and the same object is always followed by the same event, we then begin to entertain the notion of cause and connection. We then feel a new sentiment, to wit, a customary connection in the thought between one object and its usual attendant; and this sentiment is the original of that idea which we seek for.' This is manifestly wrong. A single instance of one billiard-ball moving another suffices to originate the 'sentiment,' without further repetition. Nor is there more truth in the assertion that the belief depends on 'conviction of the future

resembling the past; this explanation assumes that the general idea precedes the particular idea. When we believe that similar effects will follow whenever the same causes are in operation—when we believe that fire will burn, or that the sun will rise to-morrow—we are simply *believing in our experience*, and nothing more. We cannot help believing in our experience: that is irresistible: but in this belief, the idea of either past or future does not enter. I do not believe that fire will burn because I believe that the future will resemble the past; but simply because my experience of fire is that it burns—that it has the power to burn. Take a simple illustration, trivial, if you will, but illustrative:—A child is presented with a bit of sugar: the sugar is white, of a certain shape, and is solid; his experience of the sugar is confined to these properties: he puts it in his mouth; it is sweet, pleasant: his experience is extended; the sugar he now believes (knows) to be sweet and pleasant, as well as white and solid.* Thus far experience is not transcended. Some days later, another piece of sugar is given him. Is it now necessary for him to have any 'intuitive conviction that the future will resemble the past'—any fundamental idea independent of experience—to make him believe that if he puts the sugar in his mouth it will taste sweet? Not in the least: he believes it is sweet, because he knows it is sweet—because his experience of sugar is that it *is* sweet. By no effort could he divest himself of the idea of its sweetness, because sweetness forms an integral part of his idea of the sugar. So we may say of the sun's rising: it is part and parcel of our idea of the sun. So of one billiard-ball putting a second in motion: our experience of billiard-balls is that they put each other in motion.

* It will perhaps seem strange that we should select sweetness as an example of causation. We selected it for its simplicity. No one will deny that the taste of sweetness is as much an effect caused by the sugar as pain is an effect caused by fire. But people are apt to overlook that causation is the result of the properties of one body acting upon the properties of another. They would call sweetness a quality in sugar: but the motion of a billiard-ball they say is *caused* by another ball.

Custom has primarily nothing to do with the belief. If we had only one experience of fire—if we saw it only once applied to a combustible substance—we should believe that it would burn, because our idea of fire would be the idea of a thing which burns. Custom has however, secondarily, some influence in correcting the tendency to attribute properties to things. Thus, a child sees a friend who gives him an apple. The next time the friend comes he is asked for an apple, because the idea of this friend is of a man who, amongst other properties, has that of giving apples. No apple is given, and this idea is destroyed. Similarly, when all our experience of things is confirmatory of our *first* experience, we may say that habit or custom induces us to attribute certain effects to certain causes. When our subsequent experience contradicts our first experience, we cease to attribute those effects to those causes which we first experienced; this is only saying that our subsequent experience has destroyed or altered the idea we formed at first.

Remark how much confusion is spread over this subject by the inconsiderate introduction of the word belief. It is incorrect to say that a man *believes* that fire will burn him if he puts his finger in it; he *knows* it. He will believe that it has burned some one else—he will believe in a *proposition* you make about fire, belief being the assent to propositions: but to talk of his believing that sugar will be sweet, when he knows it *is* sweet, when he cannot think of it otherwise than as sweet; or that fire will burn when he knows it burns, is as improper as to say that he *believes* himself cold when he feels cold.

Only from this improper use of the word belief could the theory of fundamental ideas, or of 'an intuitive conviction that the future will resemble the past,' have stood its ground for a moment. If the proposition 'Fire will burn paper' were put to any one, he would unquestionably believe it, because he has no other knowledge of the fire than of its burning properties. The proposition is as evident to him as that two and two make four. Although, therefore, he may

be said to believe in the proposition, 'Fire will burn paper,' he cannot properly be said to act upon belief when he attempts to light paper: he acts upon his knowledge. Metaphysicians argue as if the belief in the immediate result of an action were a belief in some *implied proposition* about the course of nature. It is really a reliance upon experience; nothing more.

We must distinguish between belief in existence, and belief in propositions. It is inaccurate to say that a man *believes* in his own existence, as if that were a belief in a proposition. But though a man cannot believe in his own existence, simply because it is impossible for him to conceive himself as non-existent, he may believe that he will exist eternally, because that is a proposition, the converse of which is conceivable and maintainable.

The primordial act of all thinking whatever, is, as I have explained in the Prolegomena to this History, the making *present* to the mind of what is *absent* from the sense; and this, which connects all intellectual phenomena into one class, renders the accurate demarcation of them sometimes impossible, so insensibly does the one pass into the other. Thus when I say, 'I see it has rained,' because the wet streets make me infer that the wetness was caused by rain, my assertion is grounded on a mental re-presentation of the absent occurrence, precisely analogous to that which takes place when I *infer* the sweetness of the sugar before me, or *perceive* that the flower in Julia's hair is a rose, or *believe* that the paper she holds close to the candle will infallibly ignite if paper and flame come in contact. In each case the inference, perception, or belief, is the re-presentation of facts formerly present in my experience of rain, sugar, roses, and candles. Whenever I forget any of the attendant facts, i. e. fail to make them present, I can only form an incomplete conception of the thing about which I reason, or infer. Bad logic is imperfect re-presentation. In proportion to the complexity of a proposition will be the liability to error, because of the liability to suffer some of the attendant facts

to drop out of sight. Thus the proposition 'Fire will burn paper' is so simple, and accordant with daily experience, that assent to it is instantaneous; but the proposition 'Human life may extend over two centuries' is one implying so many facts which cannot be made present to the mind, because not lying within familiar experience, that instead of assent it produces denial, or at least doubt, which is suspension of belief, which again is the confessed inability to make all the facts present to the mind. That 'two and two make four' is the immediate and irresistible conclusion of every educated man; nevertheless, this very man would pause before assenting to the proposition 'Eight times three hundred and ninety-six, make three thousand one hundred and sixty-eight,' because he would have to make present to his mind the successive steps of the calculation, and this would demand an effort, great in proportion to his want of familiarity with calculations.

In spite of this identity of belief and perception, it is necessary for the perspicuity of discussion to discriminate the two, and I propose therefore to restrict the term belief to the assent to propositions, and demarcate it from those direct inferences which are made in the presence of objects and have reference to them. I would say, we believe in the proposition 'Fire burns,' but know that the paper about to be thrust into flame will ignite. Such a discrimination of terms will be found useful in discussing causation. We shall thus see in what respect assent to a proposition, complex in its elements, differs from the 'practical belief' of mankind in particular facts—we shall separate the belief of the philosopher in the proposition 'Every effect must have a cause,' from the belief of the child that the fire, which yesterday burned paper, will burn it to-day. Both beliefs are grounded on and limited by experience; but the experience of the philosopher is distinguished from that of the child by its greater accumulation of analogous facts. The 'necessity' and 'universality' which, according to Kant, distinguish the philosophical concept, and raise it above experience, will

be considered hereafter. For the present it is enough if we have reduced belief in causation (or in power) to experience of a direct kind, *not* separable from any other intellectual act, but allied to all other acts in being the mental representation of phenomena formerly present in experience. And this will help us, perhaps, to reconcile the combatants who quarrel over the idea of 'power' in causation.

Thus while it will be admitted by the one party that between two events, named respectively cause and effect, no *nexus* is perceived by us, over and above the mere fact of antecedence and sequence; and that therefore Hume is right in saying—'we only perceive this antecedence, and do not perceive the causal link;' on the other hand it must be maintained, that between those two events there is a specific *relation*, a something which makes the one succeed the other, causing this particular effect rather than another; and this subtle link it is which is the *nexus* contended for; this relation it is which distinguishes a causal act from one of accidental sequence. There must be a peculiar relation existing between oxygen and metals, otherwise metals never could be oxidised. The oxidation of iron is an effect like the ignition of paper; but it is an effect producible only through a specific relation or cause. If cause is a Relation, the reason of our inability to perceive it as an isolated existence, is the inability to isolate a relation from its related terms. It is not an object that can be presented to consciousness. Whatever may be the noumenal existence implied by the Relation, our phenomenal knowledge must ever be limited to the mere recognition of related terms. To say that we cannot perceive this Relation, and that antecedence and sequence are all that we can perceive, is only saying that we cannot penetrate beyond phenomena and their successions; but this is no more a ground for the denial of a causal nexus, than it is for the denial of an external world.

All things necessarily stand related to all other things: sometimes these relations are obtruded on our notice, because they pass from relations of coexistence into relations of

succession, and we name them causes and effects; at other times they remain in the background of unremarked coexistence, and our unsolicited attention overlooks them; we do not then name them cause and effect. The carbonate of lime, which I see before me as marble, suggests to me, in its inaction, no conception of power, or causation, because my attention is not solicited by any *successive* relations; yet, if I had witnessed the action of the carbonic acid on the lime, which originally *caused* the two substances to unite and form marble, the passage from one state to another would have suggested the idea of some power at work. It is clear that there must be relations existing between the carbonic acid and the lime, which *cause* the two to remain united, as we see them in marble. We do not see these relations—we do not therefore see the cause—but we know the cause must be in operation all the while, although, in consequence of no changes taking place, we are not solicited to observe the operation. Hence it is that only successive phenomena are named causal; and hence is it that Hume was right in saying that, in a last analysis, invariableness of antecedence and sequence is all that experience tells us of causation; although he did not, I think, state this position clearly, nor discern its real basis.

This conception of Causation, as the direct Relation between any two phenomena, whether coexistent or successive, accords with the conception that what is called the effect is itself but the union of two causes—the oxygen and the metal co-operate to form an oxide; the group of facts which we designate as the antecedent, combines with the group of facts called the sequent; as when we say that ‘Henry I. died of eating lampreys;’ by which we mean, that in a certain condition of his organism the introduction of lampreys was the antecedent to a whole series of sequences terminating in death; although we are perfectly aware that the lamprey was not the ‘cause,’ but only one integer in the sum of causes. The difficulty in fixing upon a true cause is this very complexity of relations: only when we can be said

to know all the elements of a group, can we isolate one to estimate its influence.

I have endeavoured to reconcile the two contending parties on this perplexing question, and for all further discussion must refer to Mr. Mill's chapter in his *System of Logic*, where however there is a passage which seems to me quite contrary to the doctrine he upholds. I allude to his strictures on the dogma *cessante causâ cessat et effectus*. ‘A *coup de soleil* gives a man a brain-fever: will the fever go off as soon as he is moved out of the sunshine? A sword is run through his body: must the sword remain in his body in order that he may continue dead?’* Surely this argument is tenable only by those who confound a cause with the whole group of conditions which precede, and the effect with the whole group of conditions which succeed; and is not tenable by those who hold that cause and effect are simply antecedent and sequent. The solar rays striking on the man's head produce a disturbance in the circulation, which in its turn becomes the antecedent to a congestion of the blood-vessels in the brain, which becomes a brain-fever; instead of one succession of cause and effect, we have here a series of such successions; and if we could analyse the various stages of the sunstroke, we should find that each effect did cease on the cessation of the cause; indeed, if an effect be nothing but the sequent of an antecedent—and not the product of some creative power in the cause—it must depend for its existence on the presence of the antecedent.

Hume's Theory of Causation set Kant speculating on the constituent elements of cognition; but before we follow out the development of Philosophy in that direction, it will be necessary to trace the further development of Locke's influence in other directions.

* Vol. i. p. 413, first ed.

SIXTH EPOCH.

Attempts to discover the mechanism of psychological action: the Sensational School.

CHAPTER I.

CONDILLAC.

§ I. LIFE OF CONDILLAC.

ETIENNE BONNOT, who became Abbé de Condillac, was born at Grenoble, in 1715. His life was passed mainly in study, and was not varied by any of those incidents which give interest and romance to biography. He published his first work, *Essai sur l'Origine des Connoissances Humaines*, in 1746; three years after, his *Traité des Systèmes*. His other works followed rapidly; and established for him such a reputation that he was appointed tutor to the Prince of Parma, for whose instruction he wrote the *Cours d'Études*. In 1768 the capricious doors of the Académie Française were opened to him; but once elected a member, he never after attended any of its sittings. He published his *Logique* in 1780, a few months before his death; and he left behind him his *Langue des Calculs*, published in 1798.

There is one biographical detail of interest, though I do not remember to have seen it alluded to by anyone except Mr. Maurice,* and it receives fresh interest from the point of resemblance it suggests in the lives of two other philosophers.

* MAURICE: *Modern Philosophy*.

The influence of a woman's mind in determining the later speculations of Auguste Comte, and those of another eminent thinker, still living, is avowed by them; a similar influence is avowed with equal candour and almost equal enthusiasm by Condillac in the case of Madlle. Ferrand, to whom 'he owed the illumination which dispelled his prejudices.' He regrets her loss, and the imperfect state of his work thus deprived of her revision. The merit, if there be merit, he ascribes to her. 'Les vues les plus fines qu'il renferme sont dues à la justesse de son esprit et à la vivacité de son imagination. Elle sentit la nécessité de considérer séparément nos sens, de distinguer avec précision les idées que nous devons à chacun d'eux, et d'observer avec quels progrès ils s'instruisent, et comment ils se prêtent des secours mutuels.'*

§ II. CONDILLAC'S SYSTEM.

We have seen how Idealism and Scepticism grew out of the doctrines respecting the origin of knowledge. We have now to see the growth of the Sensational School.

The success which Locke met with in France is well known. For a whole century the countrymen of Descartes extolled the English philosopher, little suspecting how that philosopher would have disclaimed their homage, could he have witnessed it. Condillac is the acknowledged representative of Locke in France. When his first work, entitled *Essai sur l'Origine des Connoissances Humaines*, appeared he had no notion of simplifying Locke by reducing all Knowledge to Sensation. He was a modest disciple, and laid down as the fundamental principle that 'sensations and the operations of the mind are the materials of all our knowledge—materials which reflection sets in action by seeking their combinations and relations.' (Chap. i. § 5.)

In 1754 appeared his celebrated work, the *Traité des Sensations*. In it he quits Locke for Gassendi and Hobbes. 'The chief object of this work,' he says, 'is to show how all

* *Traité des Sensations*, pp. 48-55.

our knowledge *and all our faculties* are derived from the senses, or, to speak more accurately, from sensations.' The inclusion of 'our faculties,' as well as our ideas, in this sensuous origin is however due entirely to Condillac. Hobbes never thought of such a 'simplification.' The divergence from Locke is obvious: instead of the two sources of ideas, recognised in the *Essay on Human Understanding*, it assumes one source only—Sensation; instead of mind, with certain elementary faculties, it assumes one elementary faculty—that of Sensibility—out of which all the faculties are evolved by the action of external objects on the senses. Nor was this a mere slip of Condillac's pen: the principle is radical; it constitutes the peculiarity of his system. Speaking of various philosophers, and quoting, with praise, the maxim attributed to Aristotle, that 'Nothing is in the intellect which was not previously in the senses,' he adds, 'Immediately after Aristotle comes Locke; for the other philosophers who have written on this subject are not worthy of mention. The Englishman has certainly thrown great light on the subject, but he has left some obscurity. . . . All the faculties of the soul appeared to him to be innate qualities, and he never suspected they might be derived from sensation itself.'

'Locke is the first,' he says, 'who remarked that the inquietude caused by the privation of an object is the principle of our actions. But he makes the inquietude born of desire, and it is precisely the contrary. . . . It remained therefore to show that this inquietude is the first principle given to us by the habits of touching, seeing, hearing, tasting, comparing, judging, reflecting, desiring, loving, hating, fearing, hoping, willing; that, in a word, it is from this arise all the habits of the soul and body.'

'Locke distinguishes two sources of ideas, sense and reflection. It would be more exact to recognise but one; first, because reflection is in its principle nothing but sensation itself; secondly, because it is less a source of ideas than a canal through which they flow from sense.'

'This inexactitude, slight as it may seem, has thrown much obscurity over his system. He contents himself with recognising that the soul perceives, thinks, doubts, believes, reasons, wills, reflects; that we are convinced of the existence of these operations, because we find them in ourselves, and they contribute to the progress of our knowledge; but he did not perceive the necessity of discovering their origin, and the principle of their generation,—he did not suspect that they might only be acquired habits; he seems to have regarded them as innate, and he says only that they may be perfected by exercise.' *

This is far enough from Locke, who would have been amazed to hear that 'judgment, reflection, the passions—in a word, all the faculties of the mind—are nothing but *sensation which transforms itself differently* (qui se transforme différemment).'

Those who are curious to see how sensation transforms itself into these faculties may read Condillac's account. 'If a multitude of sensations operate at the same time with the same degree of vivacity, or nearly so, man is then only an animal that feels; experience suffices to convince us that then the multitude of impressions takes away all activity from the mind. But let only one sensation subsist, or without entirely dismissing the others, let us only diminish their force; the mind is at once occupied more particularly with the sensation which preserves its vivacity, *and that sensation becomes attention*, without its being necessary for us to suppose *anything else in the mind*. If a new sensation acquire greater vivacity than the former, it will become in its turn attention. But the greater the force which the former had, the deeper the impression made on us, and the longer it is preserved. Experience proves this. Our capacity of sensation is therefore divided into the sensation we have had, and the sensation which we now have; we perceive them both at

* *Extrait raisonné du Traité des Sensations: Œuvres de Condillac* (1803), iv. 13. Compare: *Essai sur l'Origine des Connaissances*, p. 26; and *Logique*, pp. 25, 49, 83.

once, but we perceive them differently: the one seems as past, the other as present. The name of *sensation* designates the impression actually made upon our senses; and it takes that of *memory* when it presents itself to us as a sensation which has formerly been felt. Memory is only the transformed sensation. When there is double attention there is comparison; for to be attentive to two ideas, and to compare them, is the same thing. But we cannot compare them without perceiving some difference or some resemblance between them: to perceive such relations is *to judge*. The acts of comparing and judging are therefore only attention; it is thus that sensation becomes successively attention, comparison, judgment.'

If ever the epigram of Leibnitz, *nisi ipse intellectus*, could be used as an argument, it would be against such a system as this. Although Condillac's superficial plausibility captivated Europe for a time, there was a speedy reaction, springing from men's consciousness that, however Condillac might name the phenomena, a real distinction existed in fact. He was quite consistent. He considered that judging, comparing, numbering, imagining, wondering, having abstract ideas, having ideas of time and number, knowing general and particular truths, are only different ways of attending; all our passions are different ways of desiring; and as attention and desire are words of feeling, it is clear that sensation 'enveloppe toutes les facultés de l'âme.'

Now the first objection which must be raised against this system, though it is one which I do not remember to have seen raised, is that it presupposes the existence of the very Mind which it proceeds to deny. Condillac is called a materialist, because careless readers or uncandid antagonists have overlooked his plain and repeated statements of his belief that there is a soul in the body, and that the sensations are only the occasional causes of mental operations.*

* 'Je dis la cause occasionnelle, parceque les sensations sont les modifications propres de l'âme, et que les organes n'en peuvent être que l'occasion.' *Traité des Sensations*, p. 51.

Hence he recognises the power of the mind to acquire ideas even independently of sense; which will be the case in a future life. Nor is this hypothesis of *l'âme*, as an existing entity, a mere make-believe phrase. The activity of the soul, in sensation itself, is always presupposed by him. Thus, in his famous statue, each sensation calls forth judgment, comparison, desire; and yet Condillac pretends that these faculties thus called forth are only the sensation itself transformed; but, however he may name the process, the process itself in no respect differs from that described by Locke, who also taught that the mind exercised its faculties on materials furnished by sense.

Thus, while he pretends to evolve all knowledge and all the faculties out of sensation and the transformations of sensation (which is to be his advance on Locke), we cannot but observe that in his evolution the presence is tacitly admitted of those very faculties which are said to be evolved. In fact, he confounds the faculties with the operations of the faculties. Nor was there any alternative for him. In the absence of the faculties which elaborate sensations into perceptions, judgments, reasonings, the senses would never have raised his statue above the condition of idiocy. A man reduced to mere sensations would be like the pigeon whose cerebrum is removed, sensitive indeed, but incapable of memory, judgment, thought. Condillac was therefore forced to presuppose the existence of the mental faculties—the transforming power. To say that sensations themselves were the faculties, was equivalent to saying that exercise is the faculty of running. The child cannot run until he has learnt to use his limbs, but the exercise, in which this is learned, does not give him the limbs. Condillac was perfectly right in saying that we are not born with our mental faculties ready developed, any more than we are born capable of running at once; and when he divined this truth he was on the threshold of an important investigation, namely, How are the faculties developed? but he was unable to pursue the investigation, not having a right Method. Instead of biological, he

pursued verbal analysis. A verbal analysis of the phenomena was approximately made, and this was accepted as a substitute for the analysis of organ and function.

The second objection is, that if the mind is a *tabula rasa* as to knowledge, and is not even pre-existent as faculty (according to the metaphysicians) or as organism (according to the biologists), if, in a word, sensations and combinations of sensations create both knowledge and the knowing faculties, how can we explain the phenomena of idiocy? How is it that brutes with senses resembling our own have minds so markedly distinguished from our own? The sensations of the idiot are as vivid and varied as those of a rational man; the differences arise in the *cerebrations* of the two. Condillac felt the force of the objection respecting brutes, and attempted to elude it, first by asserting that brutes had less perfect sensations of touch, 'et par conséquent il ne sauroit être pour elles la cause occasionnelle de toutes les opérations qui se remarquent en nous;' and secondly, by assuming that the 'soul of brutes was of an essentially different order from that of man.* To the first we reply, that idiots and apes have the perfect sense of touch, without the perfection of mind assumed as following from it; to the second, that it is a mere evasion of the difficulty.

Finally, if Sensation is the origin and end of all mental faculty, how is it that men of vivid sensuous activity are not also the men of powerful intellect, which they notoriously are not; how can such a case as that of Laura Bridgman be explained?—a girl born deaf, dumb, and blind, yet manifesting unusual and varied intellectual activity. The biologist sees no difficulty here; nor does the ordinary psychologist. The one sees a cerebral organism with its inherited aptitudes, ready for its work; the other sees a Mind, with its constituent faculties. But the sensationalist has no such refuge. Unless, indeed, he belongs to that biological school which traces the development of Sensibility throughout the animal series, and notes the derivation of the faculties from

* Loc. cit.

organic developments, so that what was simple sensation at first, gradually becomes identified with the form of Sensibility peculiar to cerebration. It was no such idea as this, however, which guided Condillac. He saw that sensation was the origin of all mental phenomena; and not seeing how the faculties could be identical with sensation, he really presupposed their existence while proclaiming them to be only transformations.

I said that verbal analysis was accepted in lieu of a biological analysis. This points to a peculiarity in Condillac's system. It was his merit to have seen, and clearly exhibited, the immense influence exercised by language over thought. It was his mistake to have exaggerated that influence, and to have drawn the conclusion that a perfect science is only a perfect language.* There can be no doubt that when a science is perfect its language will be perfect also; but Condillac reverses this, and says that we see science forming itself as its language is formed; and in simplifying language we render the science more facile. Here he forgets his own remark, 'Parceque nous donnons des noms à des choses dont nous avons une idée, on suppose que nous avons une idée de toutes celles auxquelles nous donnons des noms.'†

Words are the signs of ideas, and language is a means by which reasoning is carried on, not the reasoning itself. Condillac affirms that without names we should have no abstract ideas; but the reverse is true: without the power of abstraction we should never need the names which are only signs of the abstracts. 'Si nous ne raisonnons,' he says, 'qu'avec le secours de ces dénominations, c'est une nouvelle preuve que nous ne raisonnons bien ou mal que parceque notre langue est bien ou mal faite.' So completely did he invert the real process that he declared the art of reasoning was reduced to a well-constructed language, 'because the

* 'Une science bien traitée n'est qu'une langue bien faite.' *Langue des Calculs*, p. 7. Comp. pp. 142, 163.

† *Logique*, p. 50.

order in our ideas is itself only the subordination existing in the names given to genera and species.'

Starting on the false supposition that a verbal analysis could lead to anything more than verbal analysis, it seemed to him that metaphysics was capable of the same precision as geometry, if only the expressions were as accurately determined; * and his analysis of the mind is a remarkable illustration of the facility with which a man may seem to say a good deal merely by naming things in a new way. Let any one examine Condillac's genesis of the faculties, and he will find that it is solely a process of naming.

I will begin at the beginning, and show that under the one name of Sensation he includes two really different things, that is to say, two phenomena having different bases, and although allied by a community which unites all the phenomena of Sensibility, nevertheless these two are as rigidly to be demarcated, in virtue of their specific differences, as any other two phenomena. Sensation and Ideation are two distinct functions. They have two distinct organs. To speak of Cerebration or Ideation as the same phenomenon exhibited by the organs of Sense—to call an idea a 'transformed sensation'—is equivalent to calling a muscular motion a transformed sensation. In the one case, as in the other, a sensation is the starting-point; in the one case, as in the other, the starting-point is not the sequence. A sensation stimulates a muscle into action; a sensation stimulates the Cerebrum into action. The Neurility of an ingoing nerve is transformed into Sensibility in the Centre, and again retransformed into Neurility in the outgoing nerve, which again is transformed into Contractility in the muscle. This is the sequence, as I have elsewhere endeavoured to prove; and the sequence is the same whether the final phenomenon be a thought or an action; the only difference being that in the one case the Sensibility of a Centre is reflected on the Cerebrum, in the other it is reflected on a muscle.†

* *Essai sur l'Origine des Connaissances*, p. 2.

† *Physiology of Common Life*, ii.

By Sensation therefore must be understood that form of Sensibility which belongs to the organs of Sense—including, of course, those important, but generally neglected, sensibilities which arise from the viscera and from muscular actions. The Centres of these are the various sensory ganglia at the base of the brain and in the medulla oblongata, with the ganglia imbedded in the spinal cord.

Is Ideation the same thing? It also is a form of Sensibility *—the peculiar property of ganglionic tissue—but it is a *special* form, the action of a special organ. It cannot be separated from sensation, any more than movement can be separated from sensation; but that it is the action of a special organ, and subject to special laws, suffices to demarcate it from the activity of the senses.

The error of Condillac and his followers, though mainly due to their disregard of biological method, was encouraged by the common notion that ideas are only faint impressions, copies of sensations. They are not impressions at all. Condillac says that an idea is a remembered sensation, and this remembrance is only a lesser degree of vivacity in the sensation. The idea is something else; so far from being the sensation in a lesser degree, it is not the sensation at all; it is altogether different from the sensation. Although every man who has experienced tooth-ache can have a very distinct idea of it (in other words, he can think of, and talk of tooth-ache), we defy him to detect in his idea any repetition of the feeling. Nor is this wonderful; sensation is the product of a distinct part of the nervous system, the Senses; ideas are the product of another distinct part of the nervous system, the Cerebrum: sensation is *feeling*, thought is *thinking*.

The ambiguities of language have in this case been assisted by the nature of our sensations. Thus all our visual

* 'Les idées sont, comme les sensations, des manières d'être de l'âme.' CONDILLAC: *Logique*, p. 83. True enough; but not the same *manières d'être*. Motion and secretion are modes of vital activity, but no one supposes them to be the same.

ideas, inasmuch as they assume shape, do *seem* like faint sensations; the reason is that although it is a very different thing to *look* at the sun and to *think* of it, yet, in thinking, our idea corresponds in some measure with our sensation: the idea is of a round, yellow, luminous body, and is not improperly called an *image* of the sun. If it is an image of the sun, we easily conclude that it is a faint copy of our sensation. But, in the case of other senses, there is no difficulty in detecting the error. When we say that we can *recall the sensation* of hunger, we verbally confound our power of thinking a thing with our power of feeling it. There is in truth a generic distinction between Thought and Sensation, which it is fatal to overlook; nor could it have been overlooked but for the introduction and adoption of that much-abused word 'idea,' instead of thought.

I do not believe that under normal conditions we can recover a sensation, but only the ideal sequence of the sensation. Prof. Bain, who of all psychologists, as it appears to me, has approached nearest to the truth here, remarks, that the 'exact tone of feeling, the precise inward sensation due to a state of hunger, is almost irrecoverable and unimaginable in a state of comfortable repletion.' I believe it to be utterly irrecoverable. 'But,' he adds, 'the uneasy movements, the fretful tones, the language of complaint, are all easy to recall; they belong to the more intellectual part of the system; and by these we can recover some portion of the total fact, which is also just about as much as we can communicate to a second person. The digestive state for the time being rules the tone of sensation so effectually, that we cannot by any effort restore the currents due to an entirely opposite state; we can only recover the more revivable accompaniments.*' The reason of this I take to be simply the impossibility of displacing a sensation (e.g. that of repletion) by an idea. The sensation of hunger was due to a peculiar

* BAIN: *The Senses and the Intellect*, 1st ed. p. 337. (The passage is omitted in the second edition.)

stimulus of the nervous system; so long as that stimulus was present, the sensation was present; when another stimulus replaced it, another sensation succeeded, but in the presence of that stimulus no other sensation was recoverable. The 'revivable accompaniments' were not sensations, but the *sequences* of sensations, ideal elements. When Prof. Bain contrasts the sense of sight with the sense of hunger, and says 'that we can recover a picture or vision of fancy almost as exactly as we saw it, though not so strongly,' and thinks that this gives to the sense of sight its 'intellectual character,' he appears to me to overlook the generic distinction between Sensation and Thought, a distinction which Condillac and his school systematically set aside. 'We can repossess ourselves,' he adds, 'of the exact scene as it lay to the eye; in *fact the sensation itself is the most retainable part of the whole.*' I cannot but think that, if Prof. Bain will reconsider this statement, he will admit that the sensation itself is precisely the part which is *not* retainable, not recoverable; for although the image of the landscape beheld in memory is like the actual scene which we gazed upon—or, in more accurate language, although we are similarly affected by the remembrance as by the original stimulus—this is because landscape in perception is constituted by a variety of intellectual inferences—all its relations of space, form, solidity, &c., being purely ideal elements, and these *only* are the elements present in the remembrance, the actual *sensations* not being present at all. What therefore is recoverable, is the purely ideal part of the whole; what is irrecoverable, the sensational. Precisely as in the case of hunger: we can recall some effects of hunger, even when quietly digesting dinner, but we cannot recall the sensation of hunger when we are not hungry.

The point in dispute is so important, and is so intimately bound up with the whole doctrine of the Sensational School, forming indeed the battle-ground of all psychological doctrine, that we must consider it with more than a passing attention. The confusion of Sensation with Ideation, is Condillac's systematic error; but it is an error

from which few, if any writers, even of the spiritualist schools, have been free. Explicitly, or implicitly, these two phenomena have been regarded as two aspects of the same thing. The rigorous demarcation of Sensation as one process, from Cerebration as another process—each dependent on its separate nervous centre—will be found in no psychological treatise. Nevertheless Comparative Anatomy has succeeded in demonstrating the independence of the organs of Sense and the Brain; although no one has yet succeeded in detecting the true relations which connect these independent centres, and make them act together. We know that the Brain is as much an *addition* to the organs of Sense as these organs are additions to the nervous system of the simpler animals. Low down in the animal scale we can detect no trace at all of a nervous system; ascending a few steps, we detect a simple ganglion with its prolongations; ascending higher, we detect a more complex arrangement of ganglia, and rudimentary organs of Sense; ascending still higher and higher, we detect more complex organs of Sense, and a rudimentary Brain; till at last we arrive at man, with his complex organs and his complex Brain. But so independent is the Brain, that even in the human species cases occur of 'anencephalous monsters,' that is to say, children born without any Brain whatever; and these children breathe, suck, cry, and struggle, like other children.

Granting this, we grant that the functions, Sensation and Ideation, are as independent as the organs of which they are the functions; and although Ideation is organically connected with Sensation, yet it is not more so than Muscular Motion is connected with Sensation.

It is customary to speak of the organs of Sense as if they were simple organs; we must not innovate in this matter, although we find it needful to remind the reader that each special sense is really the function of a complex apparatus of organs. The apparatus of Sight, for example, may be separated into at least three parts:—1st, for the reception of impressions of light; 2nd, for the transmission

of those impressions (i. e. the nerve with its Neurility); 3rd, for the sensation (i. e. the ganglion with its Sensibility). Of these the last only need here be specially considered, and may be called the *Sensational Centre*. In this centre the external stimulus becomes a sensation; from this centre the sensation is generally (not always) propagated to the Cerebrum, which in turn may propagate the influence to the muscles or glands.

Every sense, whether it be one of the five special senses, or of the so-called 'organic senses' (such as those of the alimentary canal and of muscular activity), has its own special centre, or *sensorium*: but there seems to be no ground for assuming, with Unzer and Prochaska, the existence of any one general *sensorium*, to which these all converge; and I shall speak therefore of the *Sensational Centres* as the seats of sensations derived from the stimuli which act on the organs of sense. Considered as Sensational Centres, they are perfectly independent of the Brain; they may and do act without implicating the Brain, for they will act when the Brain is absent; a bird deprived of its cerebrum manifests unequivocal symptoms of being sensitive to light, sound, etc. But in the normal state of the organism these centres are intimately connected with the Brain; and the stimuli which affect them directly, indirectly affect the Brain. Light, impinging on the retina, determines a change in the optic Sensational Centre; this change is usually propagated to the Cerebrum; and as the first change was a sensation, so is the second an idea; this idea may excite other ideas, or it may be so faint in its influence as to be almost immediately absorbed, and then we are said to be 'scarcely conscious' of the sensation—meaning that we thought very little about it: an example of which is the little attention we pay to the clock striking when we are engaged in study, if the fact is indifferent to us; we hear it, but do not think of it the next moment; if on the other hand the striking of the clock is not indifferent to us, the various thoughts which it awakens make us eminently 'conscious of

the sensation.' In the heat of battle, a sword passes through a man's arm, and nevertheless the wound is followed by no pain or 'consciousness;' the stimulus which under ordinary circumstances would have been propagated from a Sensational Centre, and thence radiating to the Cerebrum, would have roused up manifold ideas, namely, of consequences, what was necessary to be done, &c., is prevented from so radiating, and is not carried beyond the Sensational Centre.

Not only can we have sensations without being conscious of them—i. e. without thinking about them; we can also think with perfect freedom when all the Sensational Centres (except those of organic life) are unaffected by any external stimulus, i. e. when we have no special sensations. We do so when awake in bed during the stillness of night: the senses are in repose, the Brain is active.

Thus is the independence of Ideation and Sensation proved psychologically and anatomically; and with this proof we destroy the basis of Condillac's doctrine. But even on other grounds we may reject his theory of the origin of knowledge. It rests on two positions;—the first is the identification of all knowledge with sensation; the second is the dogma of our faculties not being innate. The first is the doctrine of Gassendi and Hobbes. It is thus stated by Diderot, one of Condillac's most celebrated pupils:—'Every idea must necessarily, when brought to its state of ultimate decomposition, resolve itself into a *sensible* representation or picture; and since everything *in* our understanding has been introduced there by the channel of sensation, whatever proceeds *out* of the understanding is either chimerical or must be able, in returning by the same road, to re-establish itself according to its sensible archetype. Hence an important rule in philosophy, That every expression which cannot find an external and sensible object to which it can thus establish its affinity, is destitute of signification.*

This is true enough, and has already been insisted on (p. 314); but although ideas have their origin in sensations

* Quoted by DUGALD STEWART, *Philosophical Essays*, p. 166.

they are not themselves sensations; they are formed from sensations, but are not sensible pictures. The least experience is sufficient to convince us that we have many ideas which cannot be reduced to any *sensible picture* whatever; or, to prevent any of the ambiguity which belongs to the word 'idea,' let us rather say we have many thoughts which cannot be reduced to pure sensations. If the elements are given by Sense, they are combined in new ways by Thought. We can think of virtue or goodness, of patriotism or scoundrelism, without being able to form mental pictures of these ideas, although each element in these composite wholes is reducible to a sensation.

Now for the second point: Condillac, as already hinted, was the first to catch a glimpse of the important truth that our *faculties* are not innate—are not even connate; but he bungled in attempting to trace the genesis of these faculties. That men are not born with the powers of reasoning, remembering, imagining, is a proposition which will meet with very little credit at first. A little experience and reflection, however, show us that as the baby certainly cannot reason, remember, or imagine, these being faculties subsequently and slowly developed, we must conclude that the mental faculties are only *potentially* in the new-born child (which is saying that they are not there at all. See *Prolegomena* IV. § 52). The baby can no more reason than he can talk. He *learns* to do both; and, before he can learn them, the powers of his cerebrum no less than the muscles of his vocal organs must grow, be developed, and strengthened by exercise. Man is no more born with reason than an acorn is born an oak. The infant and the acorn, though they contain that within them which, under fitting circumstances, will be developed into reason in the one, and foliage in the other, cannot be said to have as yet either reason or foliage.

This important distinction is obtruded upon our experience in our daily observation of children. Condillac has the merit of having seen it first; but he saw it very imperfectly, and failed altogether to make any good use of it. As an

example: He who told us that our faculties were not innate, but were 'acquired habits,' tells us, when he comes to the genesis of those faculties, that they spring into existence at once—are born full-grown—the acorn suddenly leaps into an oak. Thus his famous statue has Memory, Judgment, Desire, &c., as soon as it has Sensations. This is enough to show that if Condillac discovered an important fact, he only stumbled over it, and knew not its significance.* Let us hope that, if England is to produce any new system of Psychology, this most important point will not be overlooked: the growth and development of our faculties is as much a part of Psychology, as the growth and development of our organs is a part of Biology.†

But although Condillac must be pronounced wrong in his identification of Thought with Sensation, the attempt itself was a legitimate hypothesis, and had the effect of all hypotheses, in giving a precise direction to research. It was an attempt to discover the mechanism of the mind: it could not succeed because it was an attempt to discover a mechanism by a verbal analysis of the phenomena. We shall see presently, in Hartley and Darwin, a nearer approach to the objective study of the mechanism; but before doing so, it may be well to glance at the exceptional merits of Condillac, which secured for him an European renown.

Above all praise is the transparent clearness of his language, and the painstaking effort to condense metaphysical mists into tangible water. It was an unfortunate day for French Philosophy when—in blind reaction against doctrines which were misconceived, and therefore shuddered at—men relinquished the clear language of the 18th century for the vaporous eloquence, and the mystical jargon, which dreads clearness as a ghost dreads daylight. The descent from

* The only person who, to our knowledge, has made any use of this fact is Dr. BENEKE, who has made it the basis of his whole philosophy. See his *Neue Psychologie*, also the *Lehrbuch der Psychologie* (Berlin, 1845).

† Since this was written (1846) Mr. HERBERT SPENCER has expounded the development of the faculties in his very remarkable *Principles of Psychology* (1855).

Condillac to Maine de Biran and Victor Cousin is immense; and a deterioration of French Philosophy has accompanied this fall.

Many excellent remarks and acute analyses will be found in his very readable volumes. I would direct attention to his explanation of what Leibnitz and Hamilton have emphasized respecting the unconscious modifications of the mind;* and to the ingenious account of Memory as the tendency of the fibres of the brain to vibrate in the way they have formerly vibrated: 'on a des idées dans la mémoire comme on a dans les doigts des pièces de clavecin: c'est à dire que le cerveau a, comme tous les autres sens, la facilité de se mouvoir suivant les déterminations dont il s'est fait une habitude.'†

Although Condillac assuredly was not a Materialist in the strict sense of that term, yet, according to the lax interpretations of antagonists, his system being one which 'led to' Materialism by its identification of Thought and Feeling, and both with movements of the nerve fibres, the world has discredited his belief in the spirituality of the soul. Indeed, just as Descartes practically set aside all reference to the Creator, by expounding a system of the universe in which only matter and motion were factors; so did Condillac practically set aside all reference to a spiritual entity, by expounding a system of Psychology in which only sensation and its transformation were factors. The elimination in each case was certain to be made by successors.‡ And although, what is called Materialism I hold to be as entirely beside the true science of positive Psychology, as the doctrine of 'vortices' is beside the positive science of Cosmology, yet, in both cases, I regard the fundamental hypothesis in the light of an immense advance. Condillac destroyed, at any rate for a time, the metaphysical superstitions respecting mental operations. He set aside the unknowable entity,

* *Essai sur l'Origine des Connaissances*, pp. 43 sq.

† *Logique*, ch. ix. pp. 82 sq.

‡ See the chapter on DESTUTT DE TRACY, further on.

and attached himself to the knowable phenomena. Had it not been for the supposed moral and political consequences deducible from his mode of looking at phenomena, Psychology would now have been in a far more matured condition; but terror at the consequences produced a reaction against his point of view, and thus prevented a rectification of his errors, and a development of his method.

Two great schools of Psychology have divided the attention of Europe: that of Descartes, starting from pure Thought, and employing the Deductive Method; and that of Locke, starting from Sensation, and employing the Inductive Method. The main defect of the first has been the predominance of the Subjective Method, which has led to the disregard of the conditions of Thought, and all its manifold relations to the external medium. The main defect of the second has also been a too great reliance on this Method, and an imperfect appreciation of the objective relations. Occupied with the spirituality of the mind, the Cartesians have attempted to deduce conclusions from their conceptions of a spiritual substance. The rival school, taking an opposite point of departure, has been too exclusively occupied with the senses, and has confounded Sensation with Thought. The Scotch School of Psychologists attempted a compromise; but having failed to see that Psychology was a branch of Biology, continued to employ the old Subjective Method—with what results we shall see.

The doctrine of transformed sensations was a step in advance, if only because it fixed the attention of psychologists upon the verifiable processes, and withdrew them from interminable and profitless discussions respecting the nature of the soul—its qualities as a spiritual substance, its modes of action as a spirit. But the doctrine was in no other sense an advance. It explained nothing; it only named anew processes already known. The traveller whom we have seen attempting to explain the phenomena of the clock (*Prolegomena* § 19), after having rejected the hypothesis of the clock being an animal, arrived at the conclusion that

the pendulum is the primary cause. Now, suppose him to have been a disciple of Condillac, he would, ingeniously enough, argue that the ticking, the striking, and the movements of the hands, were all 'transformed pendulum-motions;' which indeed they are; but what is learned by learning this, unless at the same time the mechanism of transformation be displayed? Would our traveller have known more of the clock, by knowing that its phenomena were transformed pendulum-motions? Would he have been able to regulate the clock's action, or, when some accident had disturbed its mechanism, would he have been able to repair it? Brought thus to apply his knowledge, he would have discovered its infertility; the necessity for a real analysis would have taught him the vanity of his verbal analysis.

This, then, may be said to be the significance of Condillac: he helped to withdraw men from the contemplation of a metaphysical entity, but he could not guide them in objective research. Let us see how it fared with his successors.

CHAPTER II.

HARTLEY.

§ I. LIFE OF HARTLEY.

DAVID HARTLEY, the son of a Yorkshire clergyman, was born on the 30th of August, 1705. He went to Cambridge at fifteen, and became a Fellow of Jesus College. Originally destined for the Church, he had scruples about signing the Thirty-nine Articles, and gave up the Church for Medicine, which he subsequently practised with great success.

When only twenty-five years of age, he conceived the design and commenced the execution of his celebrated *Observations on Man, his Frame, his Duty, and his Expectations*, led thereto, as he tells us in the Preface, by hearing that 'the Rev. Mr. Gay had asserted the possibility of deducing all our intellectual pleasures and pains from association.' Mr. Gay published his views in a dissertation prefixed to Law's translation of King *On the Origin of Evil*; but, although Hartley acknowledges having derived the suggestion from Gay, it is clear to all readers of his work that he had thoroughly mastered, and made his own, the principle of Association as the primary law of intellectual combination. Hartley did not publish his *Observations* till 1748, eighteen years after the scheme was first laid. The year before, according to Dr. Parr, he published a small treatise as a precursor to this work. 'You will be astonished to hear,' Dr. Parr writes to Dugald Stewart,* 'that in this book, instead of the Doctrine of Necessity, Hartley openly declares for the indifference of the will, as maintained by Archbishop King.' And the reader

* STEWART'S *Dissertation*, part ii. p. 355 of HAMILTON'S edition.

will be astonished to hear that Hartley does no such thing! Dugald Stewart, who had not seen the work referred to, remarks that 'it is curious that, in the course of a year, Hartley's opinions on so very essential a point should have undergone a complete change;' still more curious, however, that Dr. Parr should have read the work and discovered in it such a mare's-nest. The tract in question is reprinted in the volume of *Metaphysical Tracts by English Philosophers of the Eighteenth Century. Prepared for the Press by the late Rev. Samuel Parr, D.D. London, 1837*—a volume precious to metaphysical students, because it contains Collier's *Clavis Universalis* and *Specimen of True Philosophy*. If the reader will turn to the third of these tracts, *Conjecturæ quædam de Sensu, Motu, et Idearum Generatione*, without date, he will find that it is nothing more nor less than an abstract, in Latin, of the first part of Hartley's *Observations*; and that the question of Free-will is nowhere opened in it. I can only suppose that Dr. Parr, unacquainted with physiological speculations, was misled by the admirable discussion of automatic and voluntary actions (pp. 31-35), into the notion that Hartley there espoused the doctrine of Free-will; but I am surprised that Sir W. Hamilton should have allowed the error to pass uncorrected in his edition of Stewart's *Dissertation*.

Hartley died on August 25, 1757, aged fifty-two, and left a name so distinguished for piety and goodness, that it in a great measure shielded his doctrines from the reprobation they have often incurred when promulgated by others.

§ II. HARTLEY'S SYSTEM.

Combining a suggestion thrown out by Newton at the end of his *Principia*, and in the questions annexed to his *Optics*, respecting vibrations of an ether as the cause of sensation, with the doctrine of Locke respecting Association of Ideas, Hartley produced a system of Psychology, which is historically curious as the first attempt to explain the physiological mechanism of psychological phenomena. If not

worth much as a contribution to Philosophy, it is very noticeable as an effort to connect intellectual with physical phenomena; and, however subsequent writers may have ridiculed, not without excuse, the vibrations and vibratiuncles which Hartley substituted for the old metaphysical conceptions, it is certain that his attempt to explain the phenomena physiologically has very much influenced the thoughts of succeeding speculators.

'Man,' he says, 'consists of two parts, body and mind.' Does he mean by this to proclaim the existence of a distinct immaterial entity superadded to the body? According to the terms of his definition, on the first page of his work this seems to be his intention; for he defines it as 'that substance, agent, principle, &c., to which we refer the sensations, ideas, pleasures, pains, and voluntary motions.' Yet the whole system of vibrations seems to imply the contrary; and, at the close of the first part of his work, he declares that he holds himself aloof from the question altogether. He will not deny the immateriality of mind: 'On the contrary, I see clearly, and acknowledge readily, that matter and motion, however subtly divided, yield nothing more than matter and motion still. But then neither would I affirm that this consideration affords a proof of the soul's immateriality.' He thinks, with Locke, that it is quite possible the Creator should have endowed matter with sensation; but he will not undertake to affirm it as a truth. 'It is sufficient for me that there is a certain connection of one kind or other between the sensations of the soul, and the motions excited in the medullary substance of the brain.'* A more rigorous logic would have forced him into a more decided opinion; for this question of the soul's immateriality is one vitally affecting the system of vibrations; and his

* Compare also Scholium to Prop. 5 (vol. i. p. 33), 'I do not by thus ascribing the performance of sensation to vibrations excited in the medullary substance, in the least presume to assert that matter can be endued with the power of sensation. It is common to all systems to suppose some motions attendant upon sensation, since corporeal objects must by their actions impress some motion upon our bodies;' and *Conjecturæ quædam de Sensu, &c.*, p. 41.

adversaries have had little difficulty in showing the insufficiency of 'vibrations' to explain the phenomena of an immaterial mind. Between the immaterial principle and these material vibrations, they saw an impassable gulf: let the ether vibrate never so rhythmically, it always remains 'vibrating ether,' it cannot become 'sensation,' or 'thought;' nor does Hartley bridge over the gulf by the assumption of an 'infinitesimal elementary body intermediate between the soul and the gross body,' to which, and from which, the vibrations of the nerves are communicated; the radical difficulty remains the same.

It may be objected, perhaps, that those who point out the defect in Hartley's hypothesis are themselves open to a similar charge, since they assume an immaterial principle to be affected by a material change, and assume the mind to be in connection with the body, following its alterations. But there is this difference between them and Hartley: they do not pretend to explain how mind is affected by body, he does. They accept, as an ultimate fact, what he attempts to elucidate; and it is his elucidation which they refuse to acknowledge.

His first proposition is, that 'The white medullary substance of the brain, spinal marrow, and the nerves proceeding from them, is the immediate instrument of sensation and motion.' Modern physiologists maintain precisely the reverse of this, declaring the *grey* matter to be the seat of sensation and motion. I may say, in passing, that both these positions seem to be erroneous in their exclusiveness; and that the white as well as the grey substance must be present, just as the zinc and copper plates must both be present in the galvanic battery.

Hartley continues: 'External objects impressed upon the senses occasion, first, in the nerves on which they are impressed, and then in the brain, Vibrations of the small—or, as one may say, infinitesimal—medullary particles. These Vibrations are motions backwards and forwards, of the same kind as the oscillation of pendulums, and the tremblings of

the particles of sounding bodies. They must be conceived to be exceedingly short and small, so as not to have the least efficacy to disturb or move the whole bodies of the nerves or brain. For that the nerves should vibrate like musical strings is highly absurd.'

The proof that external objects impress vibratory motions on the nerves is seen in the continuation of a sensation, 'since no motion besides a vibratory one can reside in any part for the least moment of time.' The vibrations are propagated by the ether which penetrates the pores of the nerves, and the vibrations of the ether 'agitate the small particles of the medullary substance of the sensory nerves with synchronous vibrations, in the same manner as the vibrations of the air in sounds agitate many regular bodies with corresponding tremblings.' 'One may conjecture, indeed, that the rays of light excite vibrations in the small particles of the optic nerve by a direct and immediate action. And it may also be that sapid and odoriferous particles are agitated with specific vibrations, and they communicate these directly to the small particles of the gustatory and olfactory nerves as well as to the interjacent ether.'

He uses vibrations as synonymous with sensations. 'The quantity of matter in bodies is always found to be proportional to their gravity: we may therefore either make the quantity of matter the exponent of the gravity, or the gravity the exponent of it, *according as either may be ascertained*. . . . And by a parity of reasoning, if that species of motion which we term vibrations can be shown by probable arguments to attend upon all sensations, ideas, and motions, and to be proportional to them, then we are at liberty either to make vibrations the exponents of sensations, ideas and motions, or these the exponents of vibrations, as best suits the inquiry; however impossible it may be to discover in what way vibrations cause sensations and ideas, i.e. though vibrations be of a corporeal and sensations and ideas of a mental nature.'

The passage in italics ought to have arrested him. A little reflection would have disclosed that while gravity and

mass may severally be taken as exponents of each other, because sometimes one, and sometimes the other, may more easily be measured. Vibrations and sensations do not stand on a similar footing. The sensation must always be more easily determined than the vibration—the latter indeed being hypothetical. Since Hartley wrote, the advance of science in this direction has been such as to give a high degree of probability to the general doctrine of vibrations; but even now our knowledge of sensations is much more certain, and much more easily ascertainable, than that of the vibrations actually involved. We could not use the one as exponent of the other, with the freedom of a physicist choosing between gravity and mass.

Let me here point out the radical insufficiency of Hartley's doctrine of vibrations. It is an hypothetical machinery substituted for that of Condillac, which adds nothing to our knowledge of psychical processes. To call them vibrations and vibratiuncles, or to call them sensations and transformed sensations, enlarges not our horizon. What we want is to trace the mechanism of thought; the doctrine of vibrations might help us, if from the known laws of vibratory bodies we could deduce explanations of mental phenomena hitherto unexplained—such, for instance, as the phenomena of polarisation and interference, in the case of Light. And I believe such deductions can be made; but not upon Hartley's vague theory; nor did he attempt to make any. Indeed, so entirely aloof is the hypothesis of vibrations from any psychological process, as explained by Hartley, that when Priestley abridged the work he omitted the hypothesis altogether, and it was never missed.

To say that vibrations produce sensations throws little light. What is the specific velocity and sweep of each vibration? That would be valuable knowledge. The researches of modern physicists have measured with surprising accuracy the *kind* of vibration which determines each specific sound, and each specific colour, and which determines the sensation of heat; but they have not yet measured the vibrations

which determine touch, tickling, taste or smell. Hartley never thought of descending from the generalities to such specialities. He contented himself with calling sensations vibrations, as his predecessors had called them motions of animal spirits. In no respect can I detect an advance upon the doctrine so well expounded by the Cartesian, De la Forge.* The only effect of the hypothesis is to make his work repulsive and slightly ridiculous in the eyes of some readers, and needlessly wearisome to others.

Moreover, note how entirely the biological method was disregarded even by a physician who had so far escaped from the metaphysical trammels as to reduce intellectual phenomena to vibrations. The clock was not 'taken to pieces' even by Hartley. Subjective analysis still furnished the datum which objective analysis would speedily have disclosed to be false, namely, that ideas were faint sensations, and that both sensations and ideas had one seat.

But although, like Condillac, Hartley failed to throw any light upon the physiological process, he carried still further than Condillac the fertile suggestion that psychological processes were in truth physiological, and must be sought in the organic mechanism; and he has the immense superiority over Condillac, that having clearly seen the significance of the fundamental Law of Association, he was enabled to give that Law an extent of application no one had previously suspected. Nay, more; he applied it to those physiological phenomena which still interest and perplex philosophers, namely, the voluntary and involuntary actions. His twenty-first proposition, and the elucidations which follow, deserve to be read even at the present day.†

The Law of Association, by which most if not all our intellectual processes are regulated, has been copiously illustrated by Scotch and English psychologists, though scarcely used by the German and French; and whoever sees the import-

* DE LA FORGE: *Remarques sur l'Homme de René Descartes*. Paris, 1729, pp. 190-7.

† The student may also compare the passage in the *Conjecturae*, p. 34.

ance of the Law will be grateful to Hartley for his services in establishing it; the more so because the vibrations and vibratiuncles have long since passed into the limbo of abortive efforts, and Hartley's name is seldom cited.

CHAPTER III.

DARWIN.

ALTHOUGH even more neglected than Hartley by the present generation, Darwin, once so celebrated, deserves mention here as one of the psychologists who aimed at establishing the physiological basis of mental phenomena.

Erasmus Darwin was born at Elton, near Newark, on the 12th of December, 1731. After studying at St. John's College, Cambridge, and taking his degree of Doctor of Medicine at Edinburgh, he established himself as a physician in Lichfield, married twice, had three sons, and died in the seventieth year of his age, on the 18th of April, 1802. As a poet, his *Botanic Garden* (1781) by its tawdry splendour gained him a tawdry reputation; as a philosopher, his *Zoonomia; or Laws of Organic Life* (2 vols. 4to, 1794-6), gained him a reputation equally noisy and fleeting.

Although couched in different language, Darwin's theory is substantially the same as Hartley's: for 'vibrations' he substitutes 'sensorial motions.' By the sensorium Darwin means 'not only the medullary part of the brain, spinal marrow, nerves, organs of sense, and of the muscles; but also at the same time that living principle, or spirit of animation, which resides throughout the body without being cognizable to our senses, except by its effects.' The changes which occasionally take place in the sensorium, as during the exertions of volition, or the sensations of pleasure or pain, are termed *sensorial motions*.*

The medullary substance, he thinks, passes along the

* *Zoonomia*, vol. i. p. 10.

nerves and mingles with the muscular fibres. The 'organs of sense consist in like manner of moving fibres enveloped in the medullary substance.' The word *idea* has various meanings, he says, and to give it precision he defines it as 'a contraction or motion, or configuration of the fibres which constitute the immediate organ of sense. Synonymous with the word *idea* we shall sometimes use the words *sensual motion*, in contradistinction to *muscular motion*.'

He then undertakes to prove the existence of these sensual motions, and deduces from this proof the fact that as we advance in life all the parts of our bodies become rigid, and are consequently less susceptible of new habits of motion, though they retain those already established. Hence only the young can learn; hence the aged forget the events of yesterday and remember those of infancy.*

'If our recollection, or imagination, be not a repetition of animal movements, I ask, in my turn, What is it? You tell me it consists of images or pictures of things. Where is this extensive canvas hung up?—or where the numerous receptacles in which these are deposited?—or to what else in the animal system have they any similitude? That pleasing picture of objects, represented in miniature on the retina of the eye, seems to have given rise to this illusive oratory! It was forgot that this representation *belongs rather to the laws of light than to those of life*; and may with equal elegance be seen in the camera obscura as in the eye; and that the picture vanishes for ever when the object is withdrawn.'†

Had Darwin left us only the passage just cited, we should have credited him with a profounder insight into Psychology than any of his contemporaries, and the majority of his successors, exhibit; and although the perusal of *Zoonomia* must convince every one that Darwin's system is built up of absurd hypotheses, Darwin deserves a place in history for

* *Zoonomia*, vol. i. p. 27.

† *Ibid.* p. 29. In BAIN's *Senses and the Intellect*, p. 60 sq., the reader will find the old theory of a *sensorium*, or chamber of images, which DARWIN here pushes aside, satisfactorily refuted from the physiological point of view.

that one admirable conception of Psychology as subordinate to the laws of life. So little has this conception been appreciated, that not only are systems of Psychology constructed in serene indifference to Physiology, but many of the questions agitated in mental Physiology are hopelessly entangled because men will not, or cannot, discriminate between problems of Physics and problems of Physiology; between phenomena regulated by laws of inorganic matter, and phenomena regulated by laws of organic matter. Thus the questions, Why with two eyes do we see objects *single*? and, Why do we not see objects *inverted*, since their images are inverted on the retina? have puzzled thousands; and not one of the attempted solutions has recognised the important fact that the problems are *psychological*, not optical nor anatomical, consequently cannot be settled by optics or anatomy; angles of incidence, and decussation of optic nerves, have nothing to do with the phenomena the moment after the Sensational Centre has been affected. We might as well attempt to deduce the assimilation of sugar from the angles of its crystals, or from the sand-like disposition of its grains, as to deduce the perception of an object from the laws of optics: the crystals and grains of sugar must first be *destroyed*, and the sugar made soluble, before it can be assimilated; the retinal images must, in like manner, first be transformed in the Sensational Centre before they can, through that Centre, affect the Cerebrum.

That this is no gratuitous hypothesis, but expresses the actual process of perception, in as far as that process has been ascertained, may perhaps be made clear from the following considerations: When I say that the perception of a visual object is a psychological act, not in any way explicable by the laws of optics, or by any investigation of the anatomical structure of the optic apparatus, I ground that assertion on certain authoritative facts; for example, I take up the vexed question of our perceiving an object as single, although two images are formed on the two retinas; and instead of endeavouring to explain it by delicate anatomy of

the retina, or the decussating fibres of the optic nerves, I at once remove it from that circle of discussion by classing it with phenomena precisely analogous. We see objects single with two eyes; but we also hear sounds as single with two ears; we smell odours as single with two nostrils; we feel objects as single with five fingers. How is it that no physiologist has reflected on the bearing of these facts? If the ordinary explanations of optical perception are correct, why do not auditory and olfactory nerves decussate, and so the whole mystery be cleared up? No sooner is attention called to the fact of single hearing and single smelling, with two auditory and two olfactory nerves, than we at once cease to regard single vision with two optic nerves as anything special, and we try if a psychological explanation will not avail. I believe the explanation to be very simple. *We cannot have two precisely similar sensations at precisely the same instant; the simultaneousness of the two sensations renders them indistinguishable.* Two sounds of precisely the same pitch and intensity, succeeding each other by an *appreciable* interval, will be heard as two sounds; but if they succeed each other so rapidly that the interval is inappreciable, no distinction will be felt, and the two will be heard as one, because heard simultaneously.

The fact of our being able to see an image reflected on the retina of an animal, and of our being able to explain on optical principles the formation of that image, has very much misled physiologists in their efforts to comprehend the sensation; they have naturally imagined that in vision we see the retinal image; whereas, unless I am altogether mistaken, we see nothing of the kind—we are affected *by* that retinal image, as in hearing we are affected by a wave of air, but do not perceive the wave; or as in smelling we are affected by the action of volatile substances on the olfactory nerve, but do not perceive the substances. We only perceive the changes effected in us by these agents.

The various Sensational Centres are *variously* affected by the *same* stimuli: electricity giving to the gustatory nerve

the stimulus of savorous bodies, to the auditory nerve the stimulus of sonorous vibrations, to the optic nerve the stimulus of luminous bodies, to the tactile nerves the stimulus of touch. Pressure on the eye causes luminous spots to be seen; we seem to see fire-flies. The pressure of over-distended blood-vessels produces spectral illusions, and we *see* daggers in the air as vividly as any at our sides. Unhappy students well know the 'singing in the ears' produced by over-study. Nor is this all: narcotics introduced into the blood excite in each Sensational Centre the specific sensation normally excited by its external stimuli: giving the appearance of luminous spots to the eyes, of singing in the ears to the auditory nerves, and of 'creeping sensations' to the nerves of touch.

The reason of this is that each Sensational Centre has its specific manner of being affected, no matter what the specific nature of the thing affecting it. While only certain things affect it sensationally, all those which *do* affect it, do so in a specific manner. Light, for instance, affects the optic centre, but produces no appreciable effect on the auditory, gustatory, or tactile centres; nevertheless the optic centre may be affected by pressure, by narcotics, or by electricity, precisely in the same way as by light. The vibrations of a tuning-fork, which affect the auditory centre as sound, affect the tactile centre as 'tickling,' not 'sound.'

From these indubitable facts it is not difficult to elicit a conclusion, namely, that sensation depends on the Sensational Centre and not on the external stimulus; that stimulus being only the cause of the sensational change. Whether the retina be directly affected by rays of light issuing from an object, or the optic centre be affected by the pressure of congested blood-vessels, in each case we *see*, in each case the optic centre is affected in that specific manner in which alone it is capable of being affected. Consequently inasmuch as the visual sensation depends on the optic centre being affected, and does *not* depend on the formation of an image on the retina, we have no alternative but to admit that the

retinal affection is transformed by the Sensational Centre, and there the impression first becomes a sensation.

It may be added as confirmation of the foregoing doctrine respecting the centre as the seat of sensation, that Müller has cited examples of luminous spectra being excited by internal causes after the complete destruction of the retina, and 'Luicke relates the case of a patient who after the extirpation of the eye for fungoid disease perceived all kinds of luminous appearances independently of external objects.'*

When therefore it is asked, Why do we see objects *erect*, when they throw *inverted* images on the retina? the answer is, Because we do not see the retinal image at all; we see, or are affected by, the object; and our perception of the erectness of that object does not depend on vision, but on our conceptions of space and the relations of space—which are not given in the visual sensation, but are ideal conceptions: conceptions which are acquired in a complicated series of inferences, according to most philosophers; which are 'forms of thought,' according to Kant; but which are by no school held to be immediate elements of sensation.

We thus return to the position that in every act of consciousness the impression on the nerve becomes transformed into a sensation only in the Sensational Centre; and the old theories of 'eidola,' 'images,' 'impressions,' are seen to be untenable. Just as the crystals of sugar have to be decomposed, and the sugar transformed into glucose, the glucose transformed into lactic acid, before sugar can be assimilable in the organism, so have the retinal images to be decomposed in the optic centre before a visual *sensation* can be produced. Attempt a more direct process, and failure is inevitable: cane-sugar injected into the veins is expelled in the urine as a foreign substance, not assimilable; and, in like manner, the most dexterous adjustment of rays of light falling *immediately* on the optic ganglion, not transmitted thereto by the optic nerve, would produce no visual sensation.

* MÜLLER: *Physiology*, Eng. Trans. i. 1072.

To call sensations and ideas by the vague name of motions, is to violate the conditions of philosophic language, and to mislead those who accept it into the belief that an explanation has been given in the change of term. That Darwin was by it misled into absurdity will be apparent in the following attempt to explain perception:—

'No one will deny,' he says, 'that the medulla of the brain and nerves has a certain figure; which, as it is diffused through nearly the whole of the body, must have nearly the figure of that body. Now it follows that the spirit of animation, or living principle, as it occupies this medulla and no other part, has also the same figure as the medulla . . . which is nearly the figure of the body. When the idea of solidity is excited, a part of the extensive organ of touch is compressed by some external body, and this part of the sensorium so compressed exactly resembles *in figure* the figure of the body that compressed it. Hence when we acquire the idea of solidity we acquire at the same time the idea of *figure*; and this idea of figure, or motion of a *part* of the organ of touch, exactly resembles *in its figure* the figure of the body that occasions it; and thus exactly acquaints us with this property of the external world.'*

He is thus brought back to the old conception of the mind being 'impressed' by the exact forms of objects, as wax is impressed by a seal. As he proceeds he gets more and more absurd. Thus he says, although 'there may exist beings in the universe that have not the property of solidity; that is, which can possess any part of space at the same time that it is occupied by other bodies; yet there may be other beings that *can assume this property of solidity or disrobe themselves of it occasionally*, as we are taught of spirits and of angels; and it would seem that the *spirit of animation* must be endued with this property, *otherwise how could it occasionally give motion to the limbs of animals?*—or be itself stimulated into motion by the obtrusions of surrounding bodies, as of light or odour?'† He is led to this by the Spinozistic

* *Zoonomia*, pp. 111–12.

† *Ibid.* p. 114.

axiom, that 'no two things can influence or affect each other which have not some property common to both of them,' which axiom destroys the possibility of spirit acting on body. Hartley, as we saw, tried to get over this difficulty by assuming the existence of a substance intermediate between body and spirit. Darwin finds it easy to assume that the spirit has the power of putting on or putting off the properties of matter just as it pleases. 'Hence the spirit of animation at the time it communicates or receives motion from solid bodies must itself possess some property of solidity. And at the time it receives other kinds of motion from light, it must possess that property which light possesses to communicate that motion named Visibility. In like manner it possesses Saporosity, Odorosity, Tangibility, and Audibility.'*

This is enough to show how little Darwin understood the real value of his luminous idea respecting Psychology based on the laws of life; enough also to make everyone understand how philosophers rebelled against such 'materialism' as issued from the explanation of mental phenomena by 'sensory motions.' Before finally quitting the *Zoonomia* we must pause a moment over the explanation of our feeling for Beauty. He describes the sensations of the babe when 'soon after it is born into this cold world it is applied to its mother's warm bosom,' and the agreeable influences which thus grow up in the mind associated with the form of the bosom 'which the infant embraces with its hands, presses with its lips, and watches with its eyes; and thus acquires more accurate ideas of the form than of the odour, and flavour, or warmth, which it perceives by its other senses. And hence in our maturer years, when any object of vision is presented to us, which, by its waving or spiral lines, bears any similitude to the form of the female bosom,—whether it be found in a landscape with soft gradations of rising and descending surface, or in the form of some antique vases, or in the works of the pencil or chisel—we feel a general

* *Zoonomia*, i. 115.

glow of delight which seems to influence all our senses; and if the object be not too large, we experience an attraction to embrace it with our arms, and to salute it with our lips, as we did in our early infancy the bosom of our mother.* One of the happiest illustrations of the generally false saying, that ridicule is a test of truth, is the reply of Sheridan to this theory of Beauty. 'I suppose,' said he, 'that the child brought up by hand would feel all these emotions at the sight of a wooden spoon!'

* *Zoonomia*, i. 145.

CHAPTER IV.

DESTUTT DE TRACY.

THE germinal error of Descartes was developed by Spinoza into a system from which Philosophy shrank back appalled. The germinal error of Locke was developed by Berkeley and Hume into systems equally repugnant to common-sense. The germinal error of Condillac was developed by the Sensational School, and received its logical expression in Destutt de Tracy; and Philosophy in alarm once more threw herself into the arms of the theological party, calling upon Metaphysics and Rhetoric for aid in her distress.

Condillac, as we have seen, admitted the existence of a spiritual entity, over and above the faculties and their acts, (which he identified with sensations). But in his system this entity was a superfluous existence. It was altogether inoperative; being neither the seat of the mind's actions, nor the shaping cause of them. The faculties, which Locke had vaguely presupposed as existent in every mind, Condillac declared to be evolved in the act of sensation. And De Tracy came to suppress Condillac's inoperative entity. Laplace told Napoleon that the simple reason why, in his exposition of the system of the world, he had not mentioned the Creator, was because 'he had no need of that hypothesis.' In the same way De Tracy had no need of the hypothesis of a spiritual entity, in expounding the system of mental phenomena.

Antoine Louis Claude Destutt de Tracy was born July 20, 1754. His family was of Scotch extraction. The clan Stutt having sent four of its sons to join the Douglas in his defence of Charles VII. against the English, these young

soldiers, after serving in the *garde Écossaise* of Charles and Louis XI., were endowed with lands in the Berri; and from one of them, married to a De Tracy of Nivernais, descended the philosopher.

After serving a brilliant career as a soldier, De Tracy joined the revolutionary party and sat in the Constituent Assembly by the side of Lafayette. Becoming *suspect*, like so many other patriots, he was imprisoned, and would assuredly have perished on the 11th Thermidor—the day fixed for his trial—had not the memorable events of the 9th Thermidor suddenly put an end to the Reign of Terror. It was during his imprisonment, indeed only four days before the 9th thermidor, that he conceived the design of the system he was afterwards to develope. Having previously prepared himself for scientific investigation by assiduously following in the footsteps of Fourcroy and Lavoisier, he resolved on analysing Thought as these great investigators analysed Matter.

Condillac was his guide. From him was borrowed the principle that sensation was not simply the primitive element of all intelligence, but the sole element. All the faculties, all the acts of the mind, were reduced to sensation. There were four fundamental acts: perception, which was the sensation of objects; memory, the sensation of remembrances; judgment, the sensation of relations; and will, the sensation of desires. *Penser c'est sentir.*

The three first faculties are our means of acquiring knowledge. The fourth is our means of action. That all four are due to the senses is evident. The external object produces an impression on our nerves, and the nerves, by a movement peculiar to them, transmits this impression to the brain. The brain, which is endowed with a peculiar force [not defined or otherwise described] receives the impression, and converts it into (1) a perception, if the object be present; into (2) a remembrance, if the object be absent; into (3) a relation, if several objects at once bring the image of their resemblances or their differences; into (4) a ratiocination, if there

are several relations; and, finally, if the object rouses desire, it provokes another movement to satisfy it; and this produces *action*, as the previous movement produced *knowledge*. Thus knowing and willing are the resultants of two organic operations, one dependent on the other.

It is needless, after what has already been said, to point out the defects of this system. All we have to note here is its logical development of Condillac's germinal error. As in Condillac, we find in De Tracy much ingenious analysis, and some suggestions which Psychology may profit by. One luminous principle he had conceived, namely, that Psychology is a part of Biology, though in the very terms of its announcement we see that he had imperfectly apprehended it: *L'idéologie est une partie de la zoologie*. It was this principle which Cabanis asserted still more effectively.

CHAPTER V.

CABANIS.

PIERRE JEAN GEORGES CABANIS was born on the 5th of June, 1757, at Conac near Brives. The dear friend of De Tracy, he was both prized as a thinker by Turgot, D'Holbach, Franklin, Condorcet, Mirabeau, Diderot, and D'Alembert, and prized as a physician by numerous patients. He died on the 6th of May, 1808.

We have traced the course of psychological investigation in its attempts to detect the mechanism of mind up to the point it had attained in the system of De Tracy. The announcement that ideology was a part of zoology, is but the systematic expression of a tendency dimly discernible even in Locke, who, as Victor Cousin complains, is fond of drawing facts from savages, children, and animals. Condillac in his *Traité des Animaux* had boldly claimed the validity of inferences deducible from animals; but a thorough application of the Comparative Method was not practicable at that period.

The prejudices of that age forbade it. The ignorance of that age made it impossible. Comparative Physiology is little older than Goethe, and Comparative Psychology is only now glimmering in the minds of men as a possibility. If men formerly thought they could understand man's body by dissecting it, and did not need the light thrown thereon by the dissection of animals; they were still less likely to seek psychical illustrations in animals, denying, as they did, that animals had minds.

The school of Locke, therefore, although regarding Mind as a property of matter, consequently directing attention to the human organism, trying to understand the mechanism of

sensation, and thus dealing with tangible realities instead of with impalpable and ever-shifting entities, was really incompetent to solve the problems it had set itself, because its Method was imperfect, and its knowledge incomplete. The good effect of its labours was positive; the evil, negative. Following out this positive tendency, we saw Hartley and Darwin advancing still nearer to a true Method;—by a bold hypothesis, making the phenomena dependent on vibrations in the nerves; thus leading to a still more precise and definite consideration of the organism.

These were, however, tentatives guided by no distinct conception of the necessary relation between organ and function; and the biological Method, truly so called, must be first sought in the work of Cabanis: *Rapports du Physique et du Moral de l'Homme*.*

A disciple of Condillac, he nevertheless saw, more distinctly than any man before him, one radical vice of Condillac's system, namely, the limitation of mental phenomena to sensations, and the non-recognition of connate instincts. If sensation were the admitted source of all mental phenomena (and Cabanis rightly made these phenomena include more than 'ideas'), it became the duty of philosophers to examine the nature of sensation itself. 'No one,' he says, 'had clearly explained in what the act of sensibility consists. Does it always presuppose consciousness and distinct perception? And must we refer to some other property of the living body all those unperceived impressions and movements in which volition has no part?' To put this question was to inaugurate a new study. It became necessary to examine whether all mental phenomena were not reducible to the fundamental laws of sensibility. 'All the while that the Intellect is judging and the Will is desiring or rejecting,

* This work originally appeared as a series of *Mémoires* read before the Institute (1798-99). It was published as a separate book in 1802, under the title *Traité du Physique et du Moral de l'Homme*; which title is also borne by the second edition of 1805. Not until 1815, and after the death of Cabanis, was the word *Rapports* substituted for *Traité*.

many other functions are going on, all more or less necessary to the preservation of life. Have these diverse operations any influence, the one on the other? And is it possible from the consideration of different physical and moral states, which are observed simultaneously, to seize the relations which connect the most striking phenomena, with such precision as to be certain that in the other less obvious cases, if the connection is less easily detected, it is so simply because the indications are too fugitive?'

This conception of a possible Psychology is in itself enough to mark for ever the place of Cabanis in the History of Philosophy. It establishes Psychology as one branch of the great science of Life. It connects the operations of intelligence and volition with the origin of all vital movements. It makes Life and Mind correlatives. This was a revival of the great truth clearly recognised by Aristotle, from whom it descended to the Schoolmen. 'Impossibile est,' says Aquinas, very emphatically, 'in uno homine esse plures animas per essentiam differentes, sed una tantum est anima intellectiva, quæ vegetativæ et sensitivæ et intellectivæ officiis fungitur.' The division of Life and Mind as two distinct entities was introduced by the Italians of the Renaissance, adopted by Descartes and Bacon, and once more rejected by Stahl, who returned to the Aristotelian conception. With the fall of Stahl's doctrine, the separation of Mind from Life again became the dictum of the schools, until Cabanis; no one since Cabanis seems to have been thoroughly impressed with the unity of the two till Mr. Herbert Spencer presented it as the basis of psychological induction.* The consequences were immediate: if Mind was to be studied as one aspect of Life, it could only be efficiently studied on that inductive and experimental Method which had reached the certain truths of positive science: 'Les principes fondamentaux seraient également solides; elles se formeraient également par l'étude sévère et par la composition des faits; elles s'étendraient par les mêmes méthodes de raisonnement.' Cabanis warns his

* SPENCER: *Principles of Psychology*, 1855.

readers that they will find nothing of what is called Metaphysics in his book; they will only find physiological researches, *mais dirigées vers l'étude particulière d'un ordre de fonctions.*

In the purely physiological direction, indeed, Cabanis had many predecessors, from Willis in the middle of the seventeenth century, to Prochaska, who preceded Cabanis by one year only.* The nervous system had of course been studied by physiologists, and this study led them to form psychological theories; but although we may find elsewhere, especially in Unzer and Prochaska, sounder views of the physiology of the nervous system, we find nowhere so clear and large a conception of physiological Psychology as in Cabanis.

'Subject to the action of external bodies,' he says, 'man finds in the impressions these bodies make on his organs at once his knowledge and the causes of his continued existence; for to live is to feel; and in that admirable chain of phenomena which constitute his existence, every want depends on the development of some faculty; every faculty by its very development satisfies some want, and the faculties grow by exercise as the wants extend with the facility of satisfying them. By the continual action of external bodies on the senses of man, results the most remarkable part of his existence. But is it true that the nervous centres only receive and combine the impressions which reach them from these bodies? Is it true that no image or idea is formed in the brain, and that no determination of the sensitive organ takes place, other than by virtue of these same impressions on the senses strictly so called?' †

This question cuts away the very root of Condillac's system. Cabanis had no difficulty in showing that Con-

* *Lehrsätze aus der Physiologie des Menschen*, 1797. Curiously enough the second and third editions of this work were exactly contemporaneous with the second and third editions of CABANIS, 1802 and 1805 (counting the publication in the *Mémoires de l'Institut* as one edition). It is not to be supposed that CABANIS knew of PROCHASKA's existence; nor is there more than a general resemblance in their physiological conclusions.

† *Deuxième Mémoire*, § ii.

dillac's limitation of our mental phenomena to the action of the special senses was a contradiction of familiar experience, e. g. the manifold influence exercised by the age, sex, temperament, and the visceral sensations generally. A survey of the human organism, compared with that of animals, conducted him to the following conclusions:—

‘The faculty of feeling and of spontaneous movement forms the character of animal nature.

‘The faculty of feeling consists in the property possessed by the nervous system of being warned by the impressions produced on its different parts, and notably on its extremities. These impressions are internal or external.

‘External impressions, when perception is distinct, are called *sensations*.

‘Internal impressions are very often vague and confused, and the animal is then only warned by their effects, and does not clearly distinguish their connection with the causes.

‘The former result from the application of external objects to the organs of sense; and on them *ideas* depend.

‘The latter result from the development of the regular functions, or from the maladies to which each organ is subject; and from these issue those determinations which bear the name of *instincts*.

‘Feeling and movement are linked together. Every movement is determined by an impression, and the nerves, as the organs of feeling, animate and direct the motor organs.

‘In feeling, the nervous organ reacts on itself. In movement it reacts on other parts to which it communicates the contractile faculty, the simple and fecund principle of all animal movement.

‘Finally, the vital functions can exercise themselves by the influence of some nervous ramifications, isolated from the system: the instinctive faculties can develop themselves, even when the brain is almost wholly destroyed, and when it seems wholly inactive.

‘But for the formation of thoughts it is necessary that the

brain should exist, and be in a healthy condition: it is the special organ of thought.’*

He justly repudiates any attempt to explain Sensibility: it must be accepted as a general property of organised beings, in the same way that attraction is accepted as a general property of bodies. No general property admits of explanation. It can only be subordinated to some other property, and be explained by it, on the supposition that it is *not* general. Accepting Sensibility therefore as an ultimate fact in the organic world, Cabanis detects its phenomena running through all those called vital and all those called mental.

‘It is something,’ he says, ‘to have established that all ideas and all moral phenomena are the results of impressions received by the different organs; and I think a still wider step is taken when we have shown that these impressions have appreciable differences, and that we can distinguish them by their seat and the character of their products, although they all act and react on each other, on account of the rapid and continual communications with the sensitive organ.’† The object of his treatise is to examine the relations existing between the moral and physical conditions, how the sensations are modified by modifications in the organs, how ideas, instincts, passions are developed and modified by the influences of age, sex, temperament, maladies, &c. It is not therefore a treatise on Psychology, but contributions towards a science of Psychology, and as such may still be read with advantage, although the science of the present day rejects many of its physiological details. He foresaw that this would be so. ‘Le lecteur s’apercevra bientôt que nous entrons ici dans une carrière toute nouvelle. Je n’ai pas la prétention de l’avoir parcouru jusqu’au bout; mais des hommes plus habiles et plus heureux achèveront ce que trop souvent je n’ai pu que tenter.’

As a specimen of inductive Psychology, we must not pass over in silence his experimental proof of instinct being developed by certain organic conditions. He takes one of

* *Deuxième Mémoire*, § viii.

† *Ibid.* § v.

the most marvellous of instincts, that of maternal love, and having analysed its physiological conditions, he says, 'In my province, and some of the neighbouring provinces, when there is a deficiency of sitting hens, a singular practice is customary. We take a capon, pluck off the feathers from the abdomen, rub it with nettles and vinegar, and in this state of local irritation place the capon on the eggs. At first he remains there to soothe the pain; soon there is established within him a series of unaccustomed but agreeable impressions, which attaches him to these eggs during the whole period of incubation; and the effect is to produce in him a sort of factitious maternal love, which endures, like that of the hen, as long as the chickens have need of aid and protection. The cock is not thus to be modified; he has an instinct which carries him elsewhere.'

The novelty of the conception which Cabanis put forth, and the interest attached to many of his illustrations, made his work very popular; but its influence was only indirect. The ignorance which almost all psychologists continued to display, not only of Physiology, but of the necessity of a physiological Method, together with the alarm excited by the accusation of 'materialism,' aided as it was by the reaction, mainly political, but soon extending itself to philosophical questions, which condemned the labours of the eighteenth century, left Cabanis with few adherents and no continuers. In elaborate works the brain was still designated as the 'organ of the Mind,' but the Mind was passionately declared *not* to be the function of the brain; the profounder views of Cabanis, which regarded Mind as one aspect of Life, were replaced by the old metaphysical conceptions of *le Moi*,—the Ego,—the immaterial Entity *playing upon* the brain as a musician plays upon an instrument.* Instinct was no longer

* One living writer, of authority, has gravely declared that mental fatigue is the consciousness which the *mind* has of the *brain's* weariness! In our confessed inability to understand what matter *is*, why will men persist in dogmatising on what it *is not*? We know absolutely nothing either of matter or spirit, we only know phenomena.

regarded as determined by the organism, changing with its changes, rendered abortive by mutilations, and rendered active by stimulation; but as a 'mysterious principle implanted' in the organism: a 'something' which, although essentially mysterious and unknowable, appeared to be perfectly well known to the metaphysicians.

By an unfortunate phrase, Cabanis gave his antagonists an advantage, and impeded the progress of his own views. He was understood to say that the brain secretes thought as the liver secretes bile. He said nothing of the kind, but his language lent itself easily to the misconception; and the ridicule and disgust which assailed it seriously damaged the dignity of the physiological method. This is what he did say: 'Pour se faire une idée juste des opérations dont résulte la pensée, il faut considérer le cerveau comme un organe particulier destiné spécialement à la produire (had he stopped here, few would have seen anything to cavil at; but he added), de même que l'estomac et les intestins à opérer la digestion, le foie à filtrer la bile.*' This is really saying no more than that thought is the function of the brain; and the difference between that, and the ordinary conception of the brain as 'the organ of the mind,' is simply the difference between precise and lax language. But the unlucky words 'digestion,' and the 'secretion of bile,' made many readers suppose that Cabanis held thought to be a secretion.

It is true that the language of Cabanis is ambiguous, and leads to the interpretation that thought is a secretion, although he really means that thought is a function. Such ambiguity is deplorable. But that it was merely a verbal laxity may be seen in the following passage. 'We see the aliments fall into the stomach; we see them pass out with new qualities, and we conclude that it has impressed on them a real alteration. We also see the impressions reaching the brain by the channels of the nerves; they are then isolated and without coherence. The organ (*viscère*) reacts upon

* CABANIS: *Rapports*, ii. *Mémoire*, § vii.

them, and soon metamorphoses them into ideas, which speech and gesture manifest externally. We conclude with the same certitude that the brain digests, so to speak, the impressions,—*qu'il fait organiquement la sécrétion de la pensée.* When a man permits himself to say that we see impressions reaching the brain through the nerves, and see the brain metamorphose these impressions into ideas, he may permit himself to say that thought is a secretion; but that this was not really his opinion will appear on an attentive study of his work. Like most psychologists and biologists, he had but hazy conceptions of function; and like most of the writers of his school, he had but an imperfect sense of the value of accuracy of expression. But I do not think that he meant what he is supposed by antagonists to have meant. I think he meant simply to indicate that thought was a function of the brain, as digestion was a function of the intestinal canal.

Certainly, if he did regard thought as a secretion, the error was monstrous, and the outcry against him was justifiable. I shall have to recur to this subject in speaking of the materialism of certain writers of our own day in Germany.

CHAPTER VI.

SUMMARY OF THE SIXTH EPOCH.

CONSIDERED as a contribution to Philosophy, the labours of the Sensational School have mainly an indirect value. They found Philosophy reduced to a question of Psychology, and found Psychology itself in so imperfect a condition as to be unable to give any reliable guidance. The question of the origin of knowledge necessarily involved the whole subject of mental operations. To determine whether we had any ideas independent of Experience, it became necessary to ascertain what Experience was—what were its conditions and limitations. To determine this, it was necessary to ascertain the relations of the mind to the body. If once it could be settled that the phenomena of mind were simply phenomena of the organism, a positive science of Psychology would become possible, and its results would have the same validity as those of the physical sciences. From the earliest times Philosophy had admitted that the Mind only manifested itself through the organs of the Body, and that these manifestations were all subject more or less to material conditions. But from the time of Descartes there had been a strong repugnance against every suggestion which seemed to rob the Intellect of its entity, and identified mental with vital phenomena. The independence of the Mind as an entity was regarded as a first truth, required by Metaphysics no less than by Theology. To doubt this truth was to 'overthrow all morality, to reduce man to the level of the brute, to make Religion a mockery.' To doubt this truth was, in fact, to incur the most incriminating of charges—Materialism.

Nevertheless, good and pious men were forced to doubt

this first truth, in spite of the odium which they knew would fall on them. And although partly from terror, and partly from the effect of old metaphysical prejudice, most of the Sensational School clung to some vague admission of a spiritual entity, whose active interference was, however, quietly ignored, nevertheless the inevitable tendency of their teaching was clearly seen by antagonists, and finally avowed by their successors.

A decision became indispensable. If the Intellect were admitted as an independent existence, having powers not gathered from organic conditions, there could be no *scientific* exposition of the conditions and limitations of human knowledge. It was always open to assume the existence of innate ideas, of truths transcending those gained through experience, and of criteria not amenable to the canons of experience. And if (the existence being admitted) all the operations of the mind were limited by organic conditions, then indeed a science became possible, but the preliminary hypothesis became superfluous.

To this dilemma the Sensational School had successfully brought Philosophy. It had presented the alternative of considering Psychology as a branch of Biology, and Mind as only one aspect of the equally mysterious Life; or of once more falling back upon Metaphysics which modern Science gloried in having escaped from for ever.

The first issue was too repulsive for the majority of philosophers. It was repulsive because it disturbed the sacred associations of awe which surrounded the mystery of Mind, and because it was said by antagonists to lead to degrading and immoral conclusions; which it did *not*, and which it could not lead to, if true; though antagonists chose to affirm that it was not true, because they assumed that it led to the immoral conclusions. While thus repulsive in its first aspect, it had the great disadvantage of not being sufficiently precise in its indications, or coercive in its arguments, to carry conviction to the unwilling mind. No great depth or subtlety was required to see that Hartley and Darwin, De Tracy and

Cabanis, were far from accounting satisfactorily for the phenomena; yet only by the force of demonstration could their disagreeable conclusions get acceptance.

There was, therefore, a general revolt. The second issue was eagerly chosen. The reaction in favour of Metaphysics triumphed for a time over what was called the Eighteenth Century Philosophy, though its real struggle was with the Sensational School. We shall trace that reaction in Scotland, Germany, and France.

SEVENTH EPOCH.

*Second Crisis: Idealism, Scepticism, and Sensationalism
producing the reaction of Common Sense.*

CHAPTER I.

REID.

DUGALD STEWART opens his *Account of the Life and Writings of Thomas Reid* with remarking that the life was 'uncommonly barren of those incidents which furnish materials for biography;' and as our space is scanty, we will content ourselves with a bare enumeration of such facts as may be useful for reference. Thomas Reid was born in 1710, at Strachan, in Kincardineshire. He was educated at Marischal College, Aberdeen. In 1752 he occupied the chair of Moral Philosophy in Aberdeen. In 1764 appeared his *Inquiry into the Human Mind on the Principles of Common Sense*. 'In 1763* the *Inquiry* received a still more substantial testimony of approbation from the University of Glasgow,' in the offer of the chair of Moral Philosophy, vacant by the resignation of Adam Smith. In 1780 Reid resigned his office, and passed the remaining years of his life in retirement and study. In 1785 appeared his *Essays on the Intellectual Powers*. He died in Glasgow in 1796, having survived four of his children. Reid's philosophy made a great stir at first, but has for

* STEWART: but there must be some error here. If the *Inquiry* was not published till 1764, Reid could not in 1763 have been offered the chair at Glasgow as a 'testimony of approbation.'

some years past been sinking into merited neglect. The appeal to Common Sense as arbiter in Philosophy is now pretty well understood to be on a par with Dr. Johnson's kicking a stone as a refutation of Berkeley. Indeed Dugald Stewart himself was fully alive to the inconsequence of such an argument, and endeavoured to shield his master by saying that the phrases 'Common Sense' and 'Instinct' were unhappily chosen. Unfortunately they were not mere phrases with Reid; they were principles. It is impossible to read the *Inquiry* and not see that Reid took his stand upon Common Sense;* and Beattie and Oswald, his immediate disciples, are still more open to the charge.

It would carry us to great lengths if we were to examine all the questionable tenets contained in the philosophy of Common Sense. We cannot, however, pass the supposed triumph over Locke, who said that personal identity consists in Consciousness; 'that is,' continues Reid, 'if you are conscious you did such a thing a twelvemonth ago, this consciousness of what is past can signify nothing else but the remembrance that I did it; so Locke's principle must be, that Identity consists in remembrance; and, consequently, a man must lose his personal identity with regard to everything he forgets.' Here Locke is altogether misstated. Consciousness does not resolve itself into any single act of memory, as Reid would here have us believe, nor can personal identity be limited to any one act. I have the consciousness of a certain mental state, wherewith is connected the remembrance of a certain anterior state, which was also connected with an anterior state, and so on. The rope is made up of many strands, and although some of these may be out of sight, not one is broken. I am connected with my boyhood by a regular series of transmitted acts of consciousness. I may have forgotten a thousand things, but I have not forgotten myself: if *one* act performed yesterday is forgotten to-day, *all* are not forgotten; and to

* 'I despise Philosophy, and renounce its guidance: let my soul dwell with Common Sense.' (*Inquiry*, ch. i. § 3.) Let it be observed, in passing, that by Reid's disciples the *Inquiry* is regarded as his best work.

remember one, however indistinctly, is sufficient to keep up the continuity of consciousness. Let those who fancy the sentiment of personal identity does not consist in the consciousness of personal identity, show us in what it does consist.

We come now to Reid's great achievement, that upon which he declared his philosophical fame to rest: the refutation of Berkeley and Hume by the refutation of the Ideal theory. This he considered as his contribution to Philosophy; this has been made the monument of his glory. It appears to us, after a long acquaintance with his writings, and a careful perusal of what his critics and admirers have advanced, that his sole merit in this respect is that of having called attention to some abuses of language, and to some examples of metaphors mistaken for facts. How much confusion the word 'idea' has always created need scarcely be alluded to; and any attempt to destroy the acceptance of the word as tantamount to *image*, must be welcomed as salutary. So far let us be grateful to Reid. But whatever abuses may have crept in with the use of the word 'idea,' it seems quite clear that Berkeley and Hume are not to be refuted by refuting the hypothesis of ideas, as Reid and his school suppose.

Let us, to avoid useless discussion, take it for granted that philosophers did adopt the theory of ideas which Reid combats; let us also grant that Reid has overturned that theory. What advance is made towards a solution of the problem? Not one step. The dilemma into which Hume threw Philosophy remains the same as ever. As I cannot transcend the sphere of my Consciousness, I can never know things except as they act upon me—as they affect my Consciousness. In other words, a knowledge of an external world is impossible, otherwise than as it appears to my Sense, which transforms and distorts it.

This proposition may be said to form the ground of Scepticism. Now, we ask, how is that proposition affected by overthrowing the ideal theory? What does it signify

whether the 'affections of my consciousness' be regarded as 'images' or not? They do not remain less purely *subjective* whichever way we regard them. They are changes *in me*. The main position of Scepticism is precisely this subjectivity of knowledge. Because we cannot transcend Consciousness we can never know things *per se*. Reid acknowledges that we cannot know things *per se*; but he says that we must believe in them, because in what we do know their existence is *suggested*. This is exactly the opinion of Locke; nay more, it is the doctrine of Hume: for he says that we believe in an external world, though we have no good reason for believing it. Sir J. Mackintosh relates that he once observed to Dr. Thomas Brown that he thought Reid and Hume differed more in words than opinions; Brown answered, 'Yes, Reid bawled out we must believe in an outward world; but added, in a whisper, we can give no reason for our belief. Hume cries out we can give no reason for such a notion; and whispers, I own we cannot get rid of it.'

Reid ought to have seen that his refutation of the ideal theory left Idealism and Scepticism untouched: * for either doctrine it matters little *how* the knowledge be acquired, so that it be entirely subjective. The argument brought forward by Dugald Stewart—that the belief in the existence of an external world is one of the Fundamental Laws of Human Belief—is more philosophical; but when he says that Berkeley's Idealism was owing to the unhappy and unphilosophical attempt of Descartes to prove the existence of the world, he forgets that Idealism was known in the ancient schools long before any one thought of proving the existence of matter. Moreover, although Stewart's formula is not open to the same objections as Reid's, yet it leaves the vital question untouched.

No one doubts that we believe in the existence of an external world. Idealism never questions the fact. The only doubt is, whether that belief be objectively as well as

* In fact MALEBRANCHE'S Idealism, which is very similar to BERKELEY'S, is founded on a theory of Perception almost identical with REID'S.

subjectively valid. To say that the belief in objective existence is a Fundamental Law, is simply saying that *we are so constituted* that we are forced to attribute external reality to our sensations. As well say we are so constituted that fire applied to our bodies will give us pain. *We are so constituted.* What then? Does this advance us one step? Not one. We have still to seek some proof of the *laws of our constitution* being the measure of the *laws of other existences*—still to seek how what is true of the subjective must necessarily be true of the objective.

Thus, granting to Stewart all he claims, we see that he does not attain to the heart of the question; and, strictly speaking, he does not touch Berkeley at all; he only touches Hume. For what answer can it be to Berkeley, to say that our Belief in matter is a Fundamental Law, not to be questioned? Berkeley would reply: 'Exactly; I said as much. I said that men believed their senses, and believed that what they saw was *out* of them. This is the law of human nature: God has so ordained it. But that which men do *not* believe, is the existence of an occult substance, an imaginary world lying underneath all appearances. You do not mean to assert that the belief in this substance is a Fundamental Law? If you do, you must be mad.' Stewart's answer is thus shown to be quite *beside* the mark.

Reid constantly declares that no reason can be given for our belief; it must be referred to an original instinctive principle of our constitution implanted in us for that express purpose. If this be so, we ask upon what pretence does Reid claim the merit of having refuted Idealism and Scepticism by refuting the ideal hypothesis? If *instinct* and not *reason* is to settle the question, then has the *ideal hypothesis* nothing to do with it; if the refutation of the ideal hypothesis sufficed, then has instinct nothing to do with it. 'To talk of Dr. Reid,' said the *Quarterly*, in its review of Stewart's Second Dissertation, 'as if his writings had opposed a barrier to the prevalence of sceptical philosophy, is an evident mistake. Dr. Reid successfully refuted the prin-

ciples by which Berkeley and Hume endeavoured to establish their conclusions; but the conclusions themselves he himself adopted as the very premisses from which he reasons. The impossibility of proving the existence of a material world from "reason, or experience, or instruction, or habit, or any other principle hitherto known to philosophers," is the argument and the *only* argument by which he endeavours to force upon us his theory of instinctive principles.'

It appears, then, that inasmuch as Reid declares *instinct* to be the *only* principle upon which we can found our belief in an external world, his argument against Berkeley is trebly vicious. First, because the *belief* was never questioned; secondly, because although we must *act* according to our instincts, such a necessity is no proof that our *beliefs are true*; thirdly, because if instinct, and not reason, is to be the arbiter, the attack on the ideal hypothesis is utterly beside the question.

Thus we see that, granting to Reid the glory he claims of having destroyed the ideal hypothesis, he has only destroyed an outpost, fancying it to be the fortress. A few words on his own theory of perception may not be out of place here.

He justly enough declared the ideal hypothesis to be gratuitous. We have no reason for supposing that the mind perceives images of things instead of the things themselves. But he overlooks, or rather denies, the fact that we perceive things *mediately*; he says we perceive them *immediately*. His explanations are contradictory and confused, but he repeats the assertion so often, that there can be no doubt he meant to say we perceive things immediately: the mind stands face to face with the thing, and perceives it immediately, without any medium of ideas, images, eidola, or the like. In this we believe him utterly in the wrong; his battle against 'ideas' carried him too far. It is one thing to say that *we are affected by the things*, and not by *images* of things; and another thing to say that we *perceive things immediately*. The former is correct; the latter is in

direct contradiction with all we know of perception; and Reid constantly contradicts himself on the point.

'When I attend,' he says, 'as carefully as I can to what passes in my mind, it appears evident that the *very thing* I saw yesterday, and the fragrance I smelled, are now the *immediate objects* of my mind when I remember it. . . . Upon the strictest attention, memory appears to me to have the things that are past, and *not present ideas*, for its objects.'

This is his position against the ideal hypothesis which assumes that nothing is perceived but what is in the mind which perceives it; that we do not really perceive things which are external, but only certain images and pictures of them imprinted on the mind. The position is untenable. The very thing, the rose, of which he thinks, is not an immediate object at all: *it* is elsewhere. The fragrance cannot even be recalled; that is to say, cannot be *felt* again, but only *thought*. All we can remember is the fact of having been affected by the rose in a certain manner: that affection we call fragrance; we cannot recall the affection. Reid could hardly therefore have meant what his words literally express. Perhaps he meant, that when we think of the rose and the fragrance, the object of which we think is the rose, not an idea of the rose. But what a truism! He says, that 'in memory the *things* that are past, and not present *ideas*, are the objects of the mind.' This is either a needless truism or a falsism. Let us alter the sentence thus—'In memory the *things thought* of are not themselves present to the mind, but the *thoughts* only are present to it.' Reid would not dispute this—could not dispute it: yet it is only a more guarded statement of the ideal hypothesis; it substitutes 'thoughts' for 'ideas.' He was misled by the ambiguity of the word 'object,' which he uses as if meaning simply what the mind is thinking of; and of course the mind thinks of the thing, and not of the idea. But the ideal hypothesis takes 'object' to be that which is immediately present to—face to face—with the mind, viz. an idea, or thought; and of course the mind thinks *by* its thoughts:

it may think about the thing, but it is through the medium of thought.

The difference is this:—The Idealist says, that when things affect us, our sensations are what we perceive, and not the things producing those sensations. Reid says, we feel our sensations, but therewith also we perceive the things. The Idealist further says, that when we think of things, the immediate object face to face with the mind is not a thing but an idea (thought.) Reid says the object is the very thing: which is either an absurdity, or else does not differ from the ideal hypothesis.

We are quite ready to admit that the pretended separation of thoughts from thinking, and the making thoughts 'objects,' is vicious; and therefore Reid's language is perhaps less objectionable. But we must confess that we see no other advantage he gains over his adversaries. He does not pretend that our sensations are at all *like* their causes; nay, he fancies that he destroys the ideal hypothesis by insisting on the want of resemblance between matter and our sensations. He says, over and over again, that the external world is in no respect like our sensations of it. 'Indeed, no man can conceive any sensation to resemble any known quality of bodies. Nor can any man show, by any good argument, that all our sensations might not have been as they are, though no body, nor quality of body, had ever existed.'* This granted, the question arises, How do you know anything of the external world? Reid answers, 'It is owing to an original instinct implanted in us for that purpose.' Push the question further, drive him into a corner, and bid him tell you what that instinct enables you to know of matter, and he will answer, 'In sensation there is suggested to us a cause of that sensation in the quality of a body capable of producing it.' This is Locke's view.

The great point in Reid's theory is, that with our sensations are joined perceptions. 'The senses have a double province,' he says; 'they furnish us with a variety of

* *Inquiry*, ch. v. § 2.

sensations, some pleasant, others painful, and others indifferent; at the same time they give us a conception, and an invincible belief of the existence of external objects. This conception and belief, which Nature produces by means of the senses, we call *perception*.* This, upon which so much stress is laid that philosophers are said to have been always in error because they overlooked it, we regard as a remarkable instance of Reid's want of subtlety. Neither Berkeley nor Hume denied the fact of our belief in the externality of the causes of sensations: Berkeley denied that these causes had an occult substratum; Hume denied that any reason could be given for our belief in their externality. What force then has 'perception'? It is nothing more than that 'belief,' according to Reid; though to call perception a belief is, to say the least, somewhat unusual. But grant all he wishes, and you grant that with our sensations there is an accompanying belief in the existence of an external cause of those sensations. Berkeley would answer, 'Very true; but that cause is not unthinking matter.' Hume would answer, 'Very true; but we can give no reason for our belief; we can know nothing of the cause.' Reid can only retort, 'Perception is belief;' a retort which has been deemed satisfactory by his school; which really is only an abuse of language; and which moreover has the further disadvantage of being available only as an argument against Hume; for against Berkeley it is powerless. If perception is belief, and we perceive an external world, Hume may be answered when he says we have no grounds for our belief. But Berkeley is not answered. He says that we *do* believe in an external world; but that world is not a world of unthinking matter—it is a world of divine agency. Reid would not pretend that in sensation or perception we can distinguish the nature of the causes which affect us; he constantly tells us that we cannot know *what* those causes are, but only *that* there are causes. As long as the noumenal world is removed from our inspection, so long must Berkeley remain unrefuted by any theory of perception.

* *Essays on Intellectual Powers*, ii. ch. xvii.

Reid says, that if we grant Berkeley's premiss—viz. 'we can have no conception of any material thing which is not like some sensation in our minds'—then are the conclusions of Idealism and Scepticism unanswerable. This premiss therefore he disputes. Now attend to his challenge:—'This I would therefore humbly propose, as an *experimentum crucis*, by which the ideal system must stand or fall; and it brings the matter to a short issue: Extension, figure, and motion may, any one or all of them, be taken for the subject of this experiment. Either they are ideas of sensation, or they are not. If any one of them can be shown to be an idea of sensation, or to have the least resemblance to any sensation, I lay my hand upon my mouth and give up all pretence to reconcile reason to common sense in this matter, and must suffer the ideal scepticism to triumph.* It was not till after repeated perusals that we caught the significance of this passage; and are not quite positive that we have understood it now. To admit it to have any force at all, we must understand 'ideas of sensation' as '*images* of sensation.' Certainly, extension is no copy of any one sensation. But if Reid means to say that the idea of extension is not the result of complex sensations which a body excites in us—if he means to say that the idea of extension is not an abstract idea by which we express a certain property of bodies, a property known to us only through sensation—then must we cease all dispute, and leave him in possession of his discovery.

Reid's theory of perception may be thus stated:—External objects occasion certain sensations in us; with these sensations we perceive the existence of certain qualities capable of producing them: these he distinguishes into primary and secondary. The primary, he says, we perceive *immediately*; the second, *mediately*.

And this is the theory by which, with the aid of an 'original instinct,' he is supposed to have refuted Idealism. Any one may see that Berkeley might readily have relinquished his ideal hypothesis, and accepted Reid's, with

* *Inquiry*, ch. v. § 7.

perfect security for Idealism. The 'unknown causes,' which Reid calls 'qualities,' Berkeley calls 'divine laws.' The difference is merely nominal.

Thus much with respect to Idealism. With respect to Hume, the theory is almost as harmless. Hume would say, 'All that is given in sensation is sensation; your "perception" (which you call belief) of qualities amounts to nothing more than a *supposition*—a necessary one, I admit; but I have always said that our belief in external causes of sensation was an *irresistible prejudice*; and my argument is, that we have nothing but the prejudice as a proof—reason, we have none.'

Finally, with respect to Locke, it will in the first place be seen that Reid's solution is neither more nor less than that given by Locke; in the second place, the boasted refutation of the ideal hypothesis is always supposed by Reid's school to be a refutation of Locke's view of the origin of knowledge; and this is a very great mistake. Because Berkeley and Hume pushed Locke's system to conclusions from which he wisely shrank, it has been generally supposed that his account of the origin of our knowledge is indissolubly bound up with the ideal hypothesis, by it to stand or fall. This probably is the meaning of the vulgar error that Locke's view of knowledge leads to atheism. It led to Hume.

In disproof of Reid's supposition we answer, firstly, Idealism is not indissolubly bound up with the ideal hypothesis, although Berkeley may have adopted that hypothesis; secondly, Locke's system is altogether independent of the hypothesis, and in his Review of the doctrines of Malebranche he very distinctly and emphatically denies it. The force of this observation will better be appreciated when it is remembered that although Locke's language is notoriously unguarded and wavering, all his reasonings are founded on the use of the word 'ideas' as synonymous with 'notions' or 'thoughts.'*

* Since the first edition of this work, Sir W. HAMILTON has published an edition of REID, illustrated and enriched by notes and dissertations of remarkable erudi-

Let us now pass to the psychological investigations of Reid and his followers. The favourite phrases with which Stewart so complacently describes them as 'inductive metaphysics' and 'experimental philosophy of the mind,' are the homage paid to the Objective Method by one who was too cultivated not to be aware of the triumphs of that Method; but we must not misinterpret the homage. There is very little Induction, and not a glimpse of Experiment, in all the writings of this school. There is much excellent analysis and sagacious remark. There is a liberal and philosophic spirit animating the pages: and in the lectures of Thomas Brown and the *Analysis* of James Mill, we find many valuable contributions to the science of Psychology. But, in my opinion, not one of them had a conception of the true province of Psychology, nor of the Methods by which such a science could be established. Brown came nearest to such a conception. Not one of them saw that the disputes which had so fruitlessly been carried on could only be settled by the substitution of a new Method of inquiry, which in all other sciences had alone been found fruitful. Not one of them saw the necessity of thoroughly understanding the organism if they would understand the functions.

Thus Reid devotes a chapter to expounding his views of the proper means of knowing the operations of the mind.* 'The chief and proper source of this branch of knowledge is accurate reflection upon the operations of our own minds.' For this it is necessary to attend to the structure of language and the course of human actions and conduct. 'The actions of men are effects; their sentiments, their passions, and their affections are the causes of those effects; and we may in many cases form a judgment of the cause from the effect.' After such a statement of the Method we need not marvel at

tion and acuteness. Respecting the interpretation Sir WILLIAM gives to REID's doctrines, I will only say that he has shown what a subtle mind can *read into* the philosophy of common sense; but he has not in the least produced the conviction in me of REID's having meant what the illustrious successor supposed him to have meant.

* *Essays*, i. ch. v.

the futile results. He begins his account of the Senses with an admission which rightly interpreted should have forced him to adopt the physiological means of investigation. He lays it down as a first truth that we can perceive no external object except through the bodily organs. For this 'we can give no reason but that such is the Will of our Maker. No man can show it to be impossible to the Supreme Being to have given us the power of perceiving external objects without such organs.' Consequently we are not to suppose these organs in their own nature necessary to perception, but only that it is the will of God that our perception is limited by our organs. On this passage Hamilton has the following absurd note: 'However astonishing, it is now proved beyond all rational doubt, that, in certain abnormal states of the nervous organism, perceptions are possible through other than the ordinary channels of the senses.' Psychology, in such hands, was in a pitiable condition. Here Hamilton obviously refers either to clairvoyance, or hallucination. These are the only abnormal states in which the ordinary channels can be considered as set aside. If he refers to clairvoyance, what are we to think of his science? If to hallucination, what are we to think of his Psychology? because, granting that the images of an excited brain are justifiably styled perceptions, is it not clear that these images are reproductions of those originally stimulated by the 'ordinary channels of sense'? The note can have no meaning unless to imply that the mind has other channels than the organs of sense; and in this meaning it is preposterous.

Although Reid insists upon the material conditions of mental phenomena, he also insists on our not considering those conditions as the causes. Some philosophers, he admits, imagine that man is 'so curiously organised that the impressions of external objects produce in him sensation, perception, remembrance, and all other operations we are conscious of. *This foolish opinion* could only take its rise from observing the constant connection which the Author of Nature hath established between certain impressions made

upon our senses and our perceptions of the objects by which the impression is made; *from which they weakly inferred* that those impressions were the proper and efficient causes of the corresponding perception.* In other sciences an inference from *constant* connection is accepted as valid; but in Psychology it appears we are to reject it, and accept instead the valuable information that 'we perceive, because God has given us the power of perceiving, and not because we have impressions from objects'!

It is unnecessary to pursue the criticism of a system which has long since ceased to have any adherents. The Psychology of the Scotch School, though containing, as I intimated before, much available matter for students, is entirely defunct as a doctrine. It failed, as it deserved to fail. It had neither a clear aim nor a right Method. It added verbal analysis to verbal analysis, and metaphysical explanation to metaphysical explanation; meanwhile physiologists and a few psychologists were 'taking the clock to pieces'—as we shall see hereafter.

* *Essays*, ii. ch. iv.

EIGHTH EPOCH.

*Psychology finally recognised as a branch of Biology.
The phrenological hypothesis.*

CHAPTER I.

GALL.

§ I. LIFE OF GALL.

FRANCIS JOSEPH GALL was born at Tiefenbrunn, in Suabia, on the 9th of March, 1757. In the preface to his great work, *Anatomie et Physiologie du Système Nerveux*, 1810, he narrates how as a boy he was struck with the differences of character and talents displayed by members of the same family, and how he observed certain external peculiarities of the head to correspond with these differences. Finding no clue given in the works of metaphysicians, he resumed his observations of nature. The physician of a lunatic asylum at Vienna allowed him frequent occasions of noticing the coincidence of peculiar monomanias with peculiar configurations of the skull. The prisons and courts of justice furnished him with abundant material. Whenever he heard of a man remarkable either for good or evil, he made his head a study. He extended his observation to animals; and finally sought confirmation in anatomy. The exterior of the skull he found, as a general rule, to correspond with the form of the brain.

After twenty years of observation, dissection, theorising, and arguing, he delivered his first course of lectures in

Vienna. This was in 1796. The novelty of his views excited a great sensation; one party fanatically opposing them, another almost as fanatically espousing them. Ridicule was not sparing. The new system lent itself to ridicule, and angry opponents were anxious, as opponents usually are, to show that what made them angry was utterly farcical. In 1800 Gall gained his best disciple, Spurzheim. Hitherto Gall had been aided only by a young anatomist, named Niklas, to whom he taught the new method of dissecting the brain;* Spurzheim's mastery of anatomical manipulation, combined with his power of generalisation and of popular exposition, came as welcome aids in the gigantic task of establishing the new doctrine on a scientific basis.

In 1802 M. Charles Villers, the translator of Kant, published his *Lettre à Georges Cuvier sur une Nouvelle Théorie du Cerveau par le Docteur Gall*. I have not been able to procure this Letter, but it is in many points interesting to the historian of Phrenology, because it expounds the doctrine as it was then conceived, and describes the localisation of the organs then fixed on by Gall. A plate represents the skull, marked by Gall himself, with the four-and-twenty organs, which at that period comprised the 'original faculties' of the mind. Among these twenty-four, there are four subsequently discarded altogether: Vital Force—Susceptibility—Penetration (independent of that which characterises the metaphysical faculty)—and Generosity (independent of benevolence). Not only are these four astonishing organs marked by Gall as representing original faculties, but the twenty organs which were afterwards retained by him are differently localised; so that, according to M. Lélut, from whom I borrow these details, 'of those twenty organs there is scarcely one which occupies the place Gall finally assigned to it.'†

* GALL pays his tribute to NIKLAS in the first edition of the *Anat. et Phys. du Système Nerveux*, i. preface xv. In the second edition this tribute is omitted; not very creditably.

† LÉLUT: *Rejet de l'Organologie Phrénologique*, 1843, p. 29.

Phrenologists should give prominence to this fact. They are bound not to pass it over. In every way it is important in the history of the doctrine. It may perhaps be satisfactorily explained; but until it is explained, it must tell against them; and for the very reason which they incessantly advance as their claim to consideration, namely that the several organs were established by *observation*, not by *theory*.* For, if the doctrine had been established by a mingling of hypothesis and observation, nothing would be more likely than that the first sketch of it would be immature in conception and uncertain in details; whereas, if the doctrine grew up slowly from a gradual accumulation of rigorously verified facts, these facts would remain constant through all the tentative changes of doctrine. Gall had been twenty years collecting facts of correspondence between external configuration and peculiarities of character. He had controlled these observations by repeated verifications. Prisons, lunatic asylums, busts, portraits, remarkable men, even animals, had furnished him with facts. Unless these facts really deserve all the credit which is demanded for them, Phrenology has the ground cut from under it; and if we are to give them our confidence, upon what ground can we relinquish it in favour of subsequent facts, which deny all that has been said before? If Gall could be deceived after twenty years of observation of facts which, according to his statement, are very easily observed, because very obvious in their characters, why may he not have been equally deceived in subsequent observations? If one collection of facts forced him to assign the organ of poetry to a particular spot (on the skull marked by him for M. Villers), how came another collection of facts to displace poetry, and substitute benevolence on that spot? Are the manifestations of poetry and benevolence so closely allied as to mislead the observer?

* 'On voit par la marche de ces recherches que le premier pas fut fait par la découverte de quelques organes; que ce n'est que graduellement que nous avons fait parler les faits pour en déduire les principes généraux, et que c'est subseqüemment et à la fin que nous avons appris à connaître la structure du cerveau.'—GALL: *Anat. et Phys.* i. preface xviii.

Spurzheim's assistance came at the right moment to rectify many of the hazardous psychological statements, and to marshal the facts in better order. Together Gall and he made a tour through Germany and Switzerland, diffusing the knowledge of their doctrine, and everywhere collecting fresh facts. On the 30th October, 1806, they entered Paris. In 1808 they presented to the Institute their *Mémoire on the Anatomy and Physiology of the Nervous System in general, and of the Brain in particular*; and in 1810 appeared the first volume of their great work, under the same title; which work was remodelled by Gall in 1823, and published in six volumes, octavo, under the title of *Fonctions du Cerveau*.

In 1813 Gall and Spurzheim quarrelled and separated. Spurzheim came to England, Gall remained in Paris, where he died on the 22nd of August, 1828. At the post-mortem examination, his skull was found to be of at least twice the usual thickness, a fact which has been the source of abundant witticisms—for the most part feeble. A small tumour was also found in his cerebellum: 'a fact of some interest, from that being the portion of the brain in which he had placed the organ of amativeness, a propensity which had always been very strongly marked in him.'* I know not in what sense the writer just quoted thinks the fact so remarkable. Tumours in other organs are not usually the indications of increased activity; nor are we accustomed to find great poets with tumours in the organ of 'imagination;' great artists with tumours in the perceptive region; great philanthropists with tumours on the frontal arch; great rebels with tumours behind their ears.†

§ II. GALL'S CONTRIBUTIONS TO SCIENCE.

The day for ridiculing Gall has gone by. Every impartial and instructed thinker, whether accepting or rejecting

* *The English Cyclopædia*, vol. iii. Art. Gall.

† To anticipate the reply that the existence of disease in the organ would provoke unusual activity of the organ, it is only necessary to state that GALL's 'propensity' is not said to have been called into unusual activity shortly before

Phrenology, is aware of the immense services rendered to Physiology and Psychology, both by Gall's valuable discoveries, and by his bold, though questionable, hypotheses. He revolutionised these studies by his method of dissecting the brain, and by his assignment of definite functions to definite organs. To verify or refute his hypotheses, vast researches were undertaken; the nervous system of animals was explored with new and passionate zeal; and now there is no physiologist who openly denies that mental phenomena are directly connected with nervous structure; while even metaphysicians are beginning to study the mechanism of the Senses, and the general laws of nervous action. The time has arrived in which it seems almost as absurd to theorise on mental phenomena in defiance of physiological laws, as it would be to adopt Stahl's advice, and consider anatomical and chemical researches futile in the study of Medicine. We owe this mainly to the influence of Gall. He first brought into requisite prominence the principle of the necessary relation, in mental as in vital phenomena, between organ and function. Others had proclaimed the principle incidentally; he made it paramount by constant illustration, by showing it in detail, by teaching that every variation in the organ must necessarily bring about a corresponding variation in the function. He did not say mind was the *product* of organisation: 'nous ne confondons pas les conditions avec les causes efficientes;' all he asserted was the correspondence between the state of the organ and its manifestations.* This was at once to call the attention of Europe to the marvellous apparatus of organs, which had previously been so little studied, except from a purely anatomical point

his death, but to have always been very active. Had there been a causal connection between the disease and the activity, increase of the activity would have followed the rapid progress of the disease.

* So also SPURZHEIM says: 'Both Dr. Gall and I have always declared that we merely observe the affective and intellectual manifestations, and the organic conditions under which they take place; and that in using the word organs we only mean the organic parts by means of which the faculties of the mind become apparent, but not that these constitute the mind.'—*Phrenology*, p. 16.

of view, that no one, until Sömmerring (who was Gall's contemporary), had observed the relation between size of the brain and intellectual power, as a tolerably constant fact in the animal kingdom. This one detail is sufficient to make every reader suspect the chaotic condition of physiological Psychology when Gall appeared.

Nor has Gall's influence been less remarkable in the purely psychological direction. People in general are little aware how that influence is diffused, even through the writings of the opponents of Phrenology, and has percolated down to the most ordinary intelligences. Gall may be said to have definitively settled the dispute between the partisans of Innate Ideas and the partisans of Sensationalism, by establishing the connate tendencies, both affective and intellectual, which belong to the organic structure of man. Two psychological facts, familiar from all time to the ordinary understanding, but shrouded from all time in the perplexities of philosophy, he made the basis of his doctrine. The first of these facts is, that all the fundamental tendencies are connate, and can no more be created by precept and education than they can be abolished by denunciation and punishment. The second fact is, that man's various faculties are essentially distinct and independent, although intimately connected with each other; whence he concluded that the Mind consists of a plurality of functions. A plurality of organs, became the necessary corollary of this proposition, as soon as the relation between organ and function was steadily conceived.

These two propositions have entered into the body of most psychological doctrines, although the corollary from the second is still vehemently disputed by many. No man of any intellectual eminence would now repeat Johnson's celebrated assertion of the poetic faculty being simply intellectual activity in a special direction, whereby Newton might have written *Othello*, and Shakspeare the *Principia*, had either of these great men set themselves the task. 'Sir, a man can walk as far east as he can walk west,' was thought a conclusive illustration; which indeed it was, when the 'unity'

of the faculties found no contradiction; no one would now accept it as more than a fallacious analogy.

Another conception systematised by Gall has also passed into general acceptance, namely, the preeminence of the affective faculties over the intellectual; also the subdivision of the affective faculties into propensities and sentiments, and of the intellectual faculties into perceptive and reflective: thus marking the progress in development from the individual to the social, from the sensuous to the intellectual, which constitutes the great progress of civilisation, in the triumph of sociality over animality.

Not only has Gall the immense merit of having decisively settled wavering conceptions respecting the Brain, and defined it as the instrument of the intellectual and moral faculties; but he has also the merit of having thoroughly grasped the significance of the Comparative Method. Conceiving the Brain as an apparatus of organs, and the mental faculties as functions of those organs, he applied this conception to the whole animal kingdom, and derived from observation of animals confirmations of his observation of man.

It may seem to the reader familiar with the current doctrines of physiologists, and unfamiliar with the history of Physiology, that this step was easy to take. Such a conclusion would be most unjust. So far from easy was the step, that illustrious anatomists before Gall had been unable to take it; and illustrious metaphysicians since Gall have been unable to follow it. Although, from the days of Hippocrates downwards, the Brain had been more or less clearly recognised, as the seat of the intellectual faculties, there was considerable hesitation as to the seat of the passions and propensities. Even Cabanis and Bichât assigned these to the viscera. Moreover those who held that the Brain was the seat of the intellect, either held that it was merely a local habitation, not a definite organ of which intellect was the function; or else they held that it was only one organ, and had very vague ideas of its functions;

they had no conception of the Brain as an apparatus of organs, no conception of each faculty having its distinct organ.

Thus the essential conception of Gall was novel; and the idea that was not novel, was opportune. Even Flourens, the uncompromising antagonist of Phrenology, admits that Gall decided a wavering opinion: 'La proposition que le cerveau est le siège exclusif de l'âme n'est donc pas neuve, n'est donc pas de Gall; elle était dans la science avant qu'eût paru sa doctrine. Le mérite de Gall, et ceci même n'est pas un médiocre mérite, est d'en avoir mieux compris qu'aucun de ceux qui l'avaient précédé toute l'importance, et de s'être dévoué à la démontrer. Elle était dans la science avant Gall; on peut dire que depuis Gall elle y règne.*' Those therefore who reject the hypothesis which is peculiar to Gall, namely the assignment of each faculty to a distinct central organ (an hypothesis only vaguely conceived by Prochaska) † must admit the importance of his arguments establishing the organic dependence of mind and the brain. That this was needed may be further seen in the reluctance which may still be observed on the part of metaphysicians to acknowledge it. Thus Sir W. Hamilton boldly asserts that 'no assistance is afforded to Mental Philosophy by the examination of the Nervous System, and that the doctrine or doctrines, which found upon the supposed parallelism of brain and mind, are, as far as observation extends, wholly groundless.‡' When such a man, not unacquainted with Physiology, could teach his pupils this independence of mental

* FLOURENS: *De la Phrénologie*, 1863, p. 20.

† PROCHASKA has a brief section, entitled, 'Do each of the divisions of the intellect occupy a separate portion of the brain?' This is merely a question raised without any attempt to answer it. The conclusion will show how vague were Prochaska's views: 'It is by no means improbable that each division of the intellect has its allotted organ in the brain, so that there is one for the perceptions, another for the understanding, probably also others for the will and imagination and memory.' *Dissertation on the Nervous System*, translated by LAYCOCK for the Ray Society, p. 447.

‡ HAMILTON, *Lectures on Metaphysics*, i. p. 264. At p. 404 he so far qualifies this absurd remark as to admit that 'the mind in its lower energies and affections is

phenomena, we need not wonder that Jeffrey, who was wholly ignorant of science, could, in his attack on Phrenology in the 'Edinburgh Review,' take up a similar position: 'The truth, we do not scruple to say it, is, that there is not the smallest reason for supposing that the mind ever operates through the agency of any material organs except in the perception of material objects, or in the spontaneous movements of the body which it inhabits; and that this whole science rests upon a postulate or assumption for which there is neither any show of evidence, nor any show of reasoning.'* It is almost cruel to cite two such passages from two such writers; but the citations show what need there was of Gall's labours.

A slight acquaintance with the history of Anatomy also shows what a need there was for the new method of dissecting the brain originated by Gall. One sentence from his antagonist Flourens will suffice here. 'Je n'oublierai jamais l'impression que j'éprouvai la première fois que je vis Gall disséquer un cerveau. Il me semblait que je n'avais pas encore vu cet organe.'† This is not the place to expound or criticise Gall's anatomy. I only wish to call attention to his great services in having originated a new method of investigation. His own results, here and elsewhere, must be accepted as preliminary indications only, not as discoveries.

The same remark applies to the fertile suggestions by which he endeavoured to connect Psychology with Biology. He had, it must be confessed, but very imperfect ideas on both these subjects; nevertheless he had a comprehensive and eminently scientific point of view. So long as he keeps at the height of this point of view and takes a panoramic

immediately dependent on the condition of the nervous system, and that in general the development of the brain in the different species of animals [not then of men?] is correspondent to their intelligence.'

* Quoted by GEORGE COMBE: *Phrenology Applied to Painting and Sculpture*, 1855, p. xiii.

† FLOURENS: *op. cit.* p. 180.

survey of the field, he is admirable. When he descends to details he stumbles.

He clearly saw and clearly expressed the truth that the greatest obstacle in the way of psychological research was the vicious practice of isolating human nature from the animal series, and of endeavouring to release it from the laws which govern animal life. We may, he says (but this is a mistake), without inconvenience neglect the relations of man to the inorganic world; but it is impossible to avoid endless confusion, unless we distinguish the functions man has in common with plants, and the functions he has in common with animals: the latter being obviously the functions of the nervous system.* Finding that animals have a nervous system which in all essentials is identical with that of man, and finding also that animals have instincts, propensities, and intelligence similar, if not the same as those of man, he justly asks whether, in examining the nature and origin of human faculties, we ought not to take those of animals into account? 'L'homme, tant qu'il est animal, serait-il un être isolé du reste de la nature vivante? serait-il gouverné par des lois organiques opposées à celles qui président aux qualités et aux facultés du cheval, du chien, du singe?'† The conception here ridiculed was firmly held by metaphysicians, who amused themselves with writing long treatises on the mind as an isolated entity, detached from all physical laws, 'exerçant ses fonctions par elle-même, se servant du corps tout au plus comme d'un moyen de communication entre elle et le monde.'

His argumentation is victorious along the whole line. If, he says, our moral and intellectual faculties are independent of organic conditions, it is needless to trouble ourselves about the brain and nervous system. Man is excluded from the field of observation, except as a physical being. 'If, on the other hand, I can demonstrate an essential relation between the exercise of his moral and intellectual forces and his

* GALL: *Fonctions du Cerveau*, i. 22 sq.

† *Ibid.* p. 48.

organisation, it will follow that the search after the organic conditions is the most important object that can occupy the physiologist; and if I can demonstrate that these organic conditions are the brain and its parts, we shall see the possibility of a doctrine of the cerebral functions, a doctrine which discloses the organs employed in the manifestation of all our propensities, all our sentiments, and all our faculties.*

The task is delicate, and difficult. Besides its intrinsic difficulty, there is the obscuration of metaphysical prejudices. 'A tout moment, les métaphysiciens viennent ralentir les progrès des naturalistes; en général c'est aux métaphysiciens qu'il faut attribuer l'ignorance où l'on est encore sur la véritable nature de l'homme.'† These doctors were employed seeking 'the seat of the soul,' which was now supposed to be in one point, now in another. 'Au lieu de rechercher simplement des phénomènes, on se bornait, comme c'est encore l'usage, à des subtilités philosophiques; on s'épuisait en spéculations sur la nature intime de l'âme.' The union of the soul with the body, and the possibility of an intermediate action; the question whether sensations and ideas are the results of impressions on the brain, and whether they left traces, copies, of themselves there; such were the favourite topics of debate. They were all set aside when the study of the cerebral functions began.

Gall not only studied the brain in man, but studied its evolution in the animal series, and with it the evolution of instincts, propensities, faculties. He knew that the dreaded reproach of Materialism would be thrown on such a method; but as he rejected Materialism, he was not to be alarmed by a clamour of misrepresentation. 'Quand je dis que l'exercice de nos facultés dépend des conditions matérielles, je n'entends pas que nos facultés soient un *produit* de l'organisation; ce serait confondre les conditions avec les causes efficientes.'‡ In a separate section devoted to this accusation of Material-

* GALL: *Fonctions du Cerveau*, p. 189. † *Op. cit.* ii. 4. ‡ *Op. cit.* i. 189.

ism, he says, 'I have always declared that I leave unsought the nature of the soul as of the body, and that I never attempt to explain the essence of either of their faculties. *I confine myself to phenomena.*'* The phenomena presented to observation, both in animals and man, he tried to connect with their material conditions; and the attempt was eminently philosophical, though, as we shall see, its results were not very successful.

§ III. GALL'S METHOD.

In the foregoing enumeration of his contributions to a real Psychology, the chief elements of Gall's Method have been indicated. What we have to do here is to bring these elements together, and mark with more precision the value to be attached to his conception of them. The point of view is important. In his vision of Psychology, as a branch of Biology, subject therefore to all biological laws, and to be pursued on biological methods, he may be said to have given the science its basis.

What were the means of investigation which Biology opened to him? They were zoological observations interpreted by anatomical, physiological, and pathological indications. The phenomena presented by animals and men were compared and classified; each elementary faculty was assigned to some distinct organ, indicated as the organ of the faculty by its constant presence in the presence of the phenomena, by its absence in the absence of the phenomena, and by its lesion in irregularities of the phenomena.

There was another and important instrument of research, which Gall disregarded, namely, subjective analysis, an instrument so necessary that some psychologists, otherwise quite alive to the importance of biological investigation, maintain that Psychology should be erected into a separate science, mainly directed by this analysis. I shall presently

* GALL: *Fonctions du Cerveau*, p. 228 sq. The whole section is worth consulting.

have to point out the consequences of Gall's disregard of this instrument. It is the only serious defect in his general conception of Method.

The most superficial glance at this Method discovers its novelty, its importance, and its immense sweep. Its novelty consisted in its precision. What before had been vaguely seen to be useful means of investigation, and had been applied with more or less success, he saw to be indispensable, and to need systematic co-ordination. The relations of the physical and moral, the influence of the body on the mind, and of the mind on the body, had been vaguely recognised; and by Cabanis an attempt had been made to systematise them. The general relations also of the Nervous System and the Mental Functions had been recognised. But no one had attempted a precise demonstration. No one had attempted to unveil the mysterious mechanism of physical and moral phenomena. In the experience of physicians various striking facts were recorded, showing how the influence of an idea determined a physical result analogous to that determined by a physical agent. The belief of having taken a purgative was known to act on susceptible patients, although the pill actually administered was made of bread; the terror at having taken an emetic by mistake, was known to produce violent vomitings, when no emetic stronger than pure water had been really taken; the pain of an exposed nerve in a carious tooth was known to disappear directly the patient entered the dentist's room. Such cases, and they are numberless, were quietly disposed of by attributing them to Imagination. They might as well have been attributed to the Differential Calculus.

Note how easily a phrase is made to do duty for a definite conception. Through what structural conditions Imagination was to act upon the bowels or on the teeth, that is to say, what parts of the physical organism were set in action by the image, no one thought of asking. Imagination was autocratic, freed from all conditions. Those naïve metaphysiologists who conceived Imagination as a perfectly free

agent unencumbered by material conditions, and capable of acting anywhere because it was an inhabitant of Nowhere (being spiritual it could not have a locality), felt no need of the discovery of a particular mechanism for the production of results. But physiologists who sought a scientific explanation, and who believed that each action of the nervous system took place under definite conditions, and through a definite mechanism, were called upon not to rest contented with a meaningless phrase, but to show what was the pathway of Imagination acting on the teeth to drive away the pain, and on the bowels to change bread-pills into purgatives, innocent drinks into emetics.

It is true that Gall made no attempt to disclose this mechanism of the moral and physical, nor was his physiological knowledge precise enough to warrant the attempt. But he did try to substitute definite ideas of the mental mechanism in lieu of the vague generalities current among philosophers; he was not content with assigning mental faculties to the nervous system, he tried to show what part of the nervous system was involved in each of the distinct faculties. The attempt proved a failure; but it was one of those germinal conceptions which enrich Science. The hypothesis did not withstand Verification; but it was an illuminating hypothesis, because while colligating known facts and instigating research, it was one to which the process of verification could be applied. Comte compares the hypothesis of Gall with the hypothesis of Descartes. Although the 'vortices' were rejected by science, they served a preliminary purpose of great utility. 'En effet, par les tourbillons, Descartes arrachait la constitution du monde aux agents surnaturels, à la métaphysique, aux entités; posant le véritable problème, il le résolvait hypothétiquement;'^{*} in like manner Gall rescued the problem of mental functions from Metaphysics, and made it one of Biology. Still more illustrative is the comparison Comte makes between Gall and Broussais. At a

^{*} LITTRÉ: *Auguste Comte et la Philos. Positive*, 1863, p. 542.

time when fevers were considered as essential maladies, morbid entities whose course had nothing to do with the conditions of the living body, Broussais, by an intuition of genius, saw that Pathology must be a particular case of Physiology, that diseases were *abnormal* conditions of the *normal* functions. He therefore propounded the hypothesis that all fevers were nothing but various forms of inflammation of the intestinal canal. The hypothesis proved false; experience has rejected it; but the principle was true, and science has consecrated it.

The hypothesis of Gall had a true basis in the propositions: 1, that the mental faculties are activities of the cerebral organs; 2, that Psychology is a branch of Biology; and 3, that any attempt to separate the mental from the physical organisation, as two independent factors, must lead to error. It had been the practice to separate mental from vital phenomena, and study them apart. Gall obeyed the Canon of Restitution (*Prolegomena*, § 54), which prescribes the necessity of completing psychological analysis by physiological analysis. The hypothesis he erected on this basis was that the moral and intellectual faculties are twenty-seven in number, each of which has for its organ a distinct portion of the convolutions of the cerebrum and cerebellum: this aspect of the hypothesis is Phrenology. Inasmuch as the external configuration of the skull is moulded on the configuration of the Brain, the organs are definitely indicated both as to position and size, by the topography of the skull: this is Cranioscopy.

Since we are here considering only the Method, it would disturb the exposition if we paused to estimate the truth of an hypothesis which will challenge attention hereafter. Let me only indicate the immense difficulty and sweep of the investigations which the hypothesis demanded. That will disclose how precipitate and unwise Gall's followers have been in not at once recognising the essentially tentative nature of an hypothesis which they have blindly accepted as a final theory. It was natural that Gall himself should have had

no doubts, and should have believed that he was in possession of all the knowledge essential to his scheme. But his successors have displayed even greater confidence; which only proves how ill-instructed they have been in Biology, and how little penetrated with the true spirit of scientific scepticism.

Phrenology may be regarded as a Physiology of the Brain; or as an Art of Reading Character by means of the skull, i.e. Cranioscopy. Gall, I am aware, conceived that his doctrine was both; and, indeed, *if* his Physiology be true, the indications of his Cranioscopy must likewise be accepted; although it is quite conceivable that his Phrenology may be a mass of errors, and yet his Cranioscopy have empirical truth. I do not say that Cranioscopy is true; neither do I say that Physiognomy or Cheironomy is true; but we may suppose observation of the coincidence between external form and mental disposition to reach a certain empirical accuracy sufficient for the establishment of an Art, quite independent of the truth or error of the cerebral Physiology which accompanies it. Thus also Lavater's Physiognomy might have been true, although his Physiology was absurd.

Phrenology may thus be detached from Cranioscopy, and be estimated apart, each having their separate grounds of evidence, though they are mutually illuminating. On Cranioscopy nothing need be said at present, except that Gall's method of research was distinguished by its comprehensiveness and sagacity. Both in the choice of facts, and in the comparative sweep of his collection, he showed the skill and patience of an investigator. I do not say that he was not biassed by his hypothesis. I do not pretend that his facts were always accurately interpreted, or that contradictory evidence was impartially weighed. Gall was human. But making every deduction, we must still admit that so vast an array of facts, zoological, pathological, and psychological, had never before been collected by any one inquirer into this abstruse subject. And, moreover, they were statements for the most part admitting of verification.

With Phrenology the case is otherwise. It claims to be a

Physiology of the Brain; and the very Method, which it is the glory of Gall to have introduced, insists on so vast and comprehensive an investigation of biological facts and laws, that every hypothesis must be regarded simply as an hypothesis, a tentative effort to range the facts in some available order, until the laws of nervous action have been positively ascertained, and the function of each organ placed beyond dispute. Gall conceived a luminous hypothesis. This had to be verified. The new physiology of the brain had to be tested by Anatomy, Physiology, Pathology, Zoology. What was the result? Those who have read these pages aright will see that I throw no discredit on Gall's genius in affirming that his physiology of the brain is altogether irreconcilable with the discoveries of modern science, and that, as far as we can be said to know anything of the nervous system, his positions are one and all erroneous. Of this more anon.

Gall was precipitate. He was forced to be so. His hypothesis could not await the tardy disclosures of science; it was a powerful stimulant to science, and meanwhile it colligated the facts then known. Gall was the Kepler of Psychology. His followers proclaim him a Newton. It is probably in consequence of this confidence in their master that while, on the one hand, we find every phrenologist since Gall, Spurzheim, and Vimont, occupied entirely with Cranioscopy, and many even speaking with disdain of anatomists and physiologists; on the other hand, we find them anxious to bring forward physiological and pathological evidence, whenever that evidence favours their views; and we hear them confidently assert that Phrenology is the only true Physiology of the nervous system. This latter assertion I am quite willing to echo, if the terms be somewhat modified, and the phrase run thus:—'Phrenology aspires to be the true Physiology of the nervous system; when that Physiology is complete, Phrenology will be complete.' But for the present we find Physiology confessing its incompleteness—confessing itself in its infancy; whereas Phrenology claims to be complete, equipped, full-statured. Rightly considered, that very claim

is a condemnation of Phrenology, as at present understood. The pretension of being a perfect or nearly perfect system, surely implies a profound ignorance of the subject, an entire misconception of the complexity of the problem it pretends to have solved? At a time when Science is unable to solve the problem of three gravitating bodies, phrenologists pretend to find no difficulty in calculating the result of forces so complex as those which constitute character; at a time when the nervous system is confessed, by all who have studied it, to be extremely ill-understood, the functions of that system are supposed to be established; at a time when Physiology is so rapidly advancing that every decade renders most books antiquated, a Psychology professedly founded on that advancing science remains immovable!

Gall was on the right path when he entitled his first great work *Anatomy and Physiology of the Nervous System*.^{*} His successors have quitted that path. In spite of his emphatic declarations, when he was engaged in his exposition of the anatomy and physiology of the nervous system,[†] declarations of the necessity to make the study of organ and function go hand in hand, so that he would only have his labours regarded 'as the basis of an essay towards a more perfect work;' in spite, we say, of every philosophical consideration, his successors have neglected Physiology for Cranioscopy; not one of them has made or attempted to make any discovery or extension of discovery in the direction Gall so successfully opened; and the result of this neglect has been twofold,—first, that since Gall and Spurzheim, Phrenology has not taken a single step; secondly, that all the eminent physiologists of Europe who have devoted themselves to the study of the nervous system, unanimously reject a theory which does not keep pace with the advance of science. It is very easy for

^{*} 'Quiconque,' he says, 'est convaincu que la structure des parties du cerveau a un rapport nécessaire et immédiat avec leurs fonctions, trouvera qu'il est naturel de réunir ces deux objets l'un à l'autre, en les considérant et en les traitant comme un seul et même corps de doctrine.'—*Anat. et Phys.* pref. xxv.

[†] Compare his *Anat. et Phys. du Syst. Nerveux*, i. 95 and 271.

phrenologists to disregard the unanimous opposition of physiologists, and to place this opposition to the account of prejudice, or the 'not having sufficiently studied Phrenology;' but an impartial on-looker sees clearly enough that, making every allowance for prejudice, the opposition rests mainly on the discrepancy between the facts stated by phrenologists and the facts which Science has hitherto registered. Had phrenologists kept themselves acquainted with what was gradually being discovered by physiologists, they would have seen that something more than prejudice must be at work when all the eminent neurologists, such as Serres, Flourens, Majendie, Leuret, Longet, Lélut, Lafargue, Baillarger, Müller, Valentin, Gratiolet, Vulpian, Wagner, and Schiff, declare against Phrenology; although every one of these is ready to admit the importance of Gall's method of dissection, ready to incorporate whatever results Gall arrived at, which can be in any way confirmed. Authorities are not reasons; but the unanimity on this point has a reason. I am indisposed to estimate a doctrine by the array of names on its side; but I cannot overlook the fact that here physiologists belonging to very opposite schools of thought all agree in rejecting the facts, no less than the doctrines, advanced by Gall; and this unanimity is the more striking because there is scarcely a single man of eminence on the other side. I do not blame phrenologists for having rendered no assistance to Physiology by their own labours; but I am forced to point out the consequences of their having neglected to follow the path commenced by Gall, and having deviated into that of simple Cranioscopy. The neglect of which they complain, is entirely owing to their presenting a rude sketch as a perfect science, and to their keeping behind the science of their day, instead of on a level with it. Impatient of contradiction, they shut their eyes to difficulties; unable to accommodate their principles to the principles of Physiology, they contemptuously dismiss objections as 'merely theoretical,' and fall back upon their 'well-established facts.'

This point must not be shirked. Gall's merit is that of

having reduced Psychology to a branch of Biology. He must not be at once credited with a revolution, and exculpated from the results. Not only did he take his stand on Phrenology, but emphatically declared that his cranial researches were necessary in order to arrive, by means of observation, at a knowledge of the functions of the various parts of the brain.* 'Mais on affecte d'ignorer la physiologie,' he complains, 'et de ne connaître nous et nos travaux que sous le point de vue de *cranioscopie* de *cranioscopes*.' He was justly wroth with adversaries who tried to divert public attention from his real researches by sarcasms on Cranioscopy. And Broussais, when he became a disciple, repudiated even the name of Psychology. 'Non, messieurs, la phrénologie n'est point un système de psychologie: nous ne devons pas admettre dans cette enceinte, des qualifications qui suggèrent des théories hypothétiques. La phrénologie est la physiologie du cerveau; voilà quelle doit être la véritable acception de ce mot.'†

It is true—and this is some justification of Gall's successors—that inasmuch as Cranioscopy was really the starting-point, and means of verification, of his hypothesis, he did lay great stress on it; affirming that to it we owed 'une physiologie et par conséquent la partie la plus essentielle de la pathologie du cerveau.' And he adds this naïve and astounding proposition: 'There is no other means possible whereby to discover the functions of the cerebral organs; all the others serve at most to confirm what has been discovered by inspection of skulls.'‡

This remark discloses what every biologist who reads Gall will have seen at once, that Gall had extremely imperfect views of what constituted Physiology, and how it was to be studied. That an inspection of the varieties in configuration of the skull might lead to an Art of reading character is conceivable; but that it could by any possibility lead to a discovery of the functions of the nervous masses to which the

* *Fonctions du Cerveau*, ii. p. 33.

† BROUSSAIS: *Cours de Phrénologie*, 1836, p. 2.

‡ *Fonctions*, ii. p. 35.

skull formed a protecting dome, even supposing that the configurations represented with perfect accuracy the forms of these masses, is assuredly not conceivable by any physiologist. And M. Flourens is thoroughly justified in affirming that Gall, who has given us an anatomy of the brain, 'has not even suspected its physiology. His phrenology, if anything, is a psychology, not a physiology.'* It is to be observed that Gall, who acutely enough saw the impossibility of discovering functions from the simple inspection of organs, contented himself with simple inspection, and never once invoked the aid of the indispensable instrument Experiment. 'On a pendant des siècles entiers,' he says, 'confondu les tendons et les ligaments avec les nerfs, et l'organisation du cœur a si peu conduit les anatomistes à la connaissance de ses fonctions que les artères ont été considérées comme des tubes conducteurs de l'air.'† Perfectly true; and to what does it lead? Evidently to the necessity of determining function by Experiment, where Observation does not disclose it; yet this was precisely the conclusion Gall would not accept. He never experimented himself; he paid no attention to the experiments of others. In fact he had really no other mode of determining function than the extremely fallacious Observation of the coincidences of configuration and character. His doctrine required an anatomical demonstration of the important position that the Brain was an apparatus of organs. Each of these organs needed definition. But unhappily science was not sufficiently advanced to give him the requisite materials; and he was too imperfectly versed in biological philosophy to have formed distinct ideas of what constituted an organ.‡

The convolutions of the Brain, which Gall has mapped out

* FLOURENS, *op. cit.* p. 188.

† *Réponse au Rapport de M. Cuvier*, p. 245.

‡ 'Aussi tous les anatomistes ont-ils, à juste titre, traité une telle distribution comme arbitraire et désordonnée, puisque n'étant assujétie à aucune notion rigoureuse de philosophie anatomique sur la différence réelle entre un organe et une partie d'organe, elle comporte des subdivisions en quelque sorte indéfinies, que chaque phrénologue semble pouvoir multiplier à son gré.' COMTE: *Cours de Philos. Positive*, iii. p. 819.

into several distinct compartments, each compartment being the organ of a distinct faculty, are in reality not more distinct than the several folds of a piece of velvet; and a little reflection discloses the absurdity of supposing that one portion of this velvet could be endowed with different properties from every other portion, simply in virtue of its superficial position. The tissue of which the convolutions consist is the same throughout; just as the tissue of the velvet is the same throughout its folds; and that the mere form of convolution has nothing whatever to do with the nature of the psychological faculties, is not only evident *à priori*, but is proved *à posteriori*, by the existence of those faculties in animals with unconvoluted brains. Of this more anon.

It was Gall's imperfect conceptions of organ and function which prevented his seeing that his mode of determining function was very misleading. What would he have said to a physiologist, who, hearing that the liver formed bile and sugar, should have assigned the property of bile-formation to one lobe, and the property of sugar-formation to another lobe, no structural differences having been observed? or to one who should assign to the different lobules of the kidney functions as different as are assigned to the different convolutions of the brain? * It is perfectly true that from inspection of an organ no idea of its function can be obtained; and this truth has blinded phrenologists who are not physiologists to the necessity of nevertheless always making anatomy the basis of every physiological analysis. No inspection of the alimentary canal could disclose to us that its function was that of digestion. Nevertheless the function of digestion, except in the crude conception of ordinary men, is only intelligible after a rigorous analysis of the several processes, buccal, stomachal, and intestinal; for the intelligence of

* If he relied on a variety of cases in which the sugar-forming property was active and feeble in conjunction with large and small developments of one lobe, this induction would be set aside by the overwhelming force of the induction on which had been established the rule, that without differences of structure there can be no differences of property; and still less force would be allowed to an induction based on coincidences which were far from constant.

each of which, we must assign to each gland its specific secretion, and to each secretion its specific action: a physiologist who should attempt the explanation of digestion on any other mode would justly be slighted by every good biologist in Europe. If Phrenology is the Physiology of the nervous system, it must give up Gall's approximative method for a method more rigorously scientific; and, as Auguste Comte justly remarks, phrenologists, before they can take rank among men of science, must 'reprendre, par une série directe de travaux anatomiques, l'analyse fondamentale de l'appareil cérébral, enfaisant provisoirement abstraction de toute idée de fonctions.'*

§ IV. APPLICATION OF THE METHOD.

Observation of men and animals furnished Gall with materials from which a rough sketch of mental phenomena was produced; and whatever deficiencies this sketch presented, it had the great and lasting merit of an inductive basis. Instead of deducing a scheme of the faculties from some *à priori* fiction about the nature of the soul, or the simplicity of spiritual substance; instead of deducing the scheme from certain logical and psychological traditions; instead of deducing the scheme from verbal analyses which presented all our faculties as transformed sensations, he sought inductively to ascertain what were the elementary faculties, by ascertaining which of them were manifested separately. 'So far,' says Mr. Combe, 'from a disposition to invent a theory being conspicuous, there appears in the disjointed items of information, which Dr. Gall at first presented to the public, a want of even an ordinary regard for systematic arrangement. His only object seems to have been to furnish a candid and uncoloured statement of the facts in nature which he had observed; leaving their value to be ascertained by time and farther investigation. As

* *Philosophie Positive*, iii. p. 821. COMTE is favourable to GALL, yet see his remarks on the multiplication of the faculties, p. 823 *sq.*

soon, however, as observation had brought to light the great body of facts, and the functions of the faculties had been contemplated with a philosophical eye, a system of mental philosophy appeared to emanate almost spontaneously from the previous chaos.*

It was here, in this construction of a system, that the absence of subjective analysis was most injurious. Observation had supplied a mass of materials, and these were rough-hewn in a hasty unsystematic way. There was no criticism applied to the observations, no analysis disentangled their complexities. Spurzheim and George Combe introduced several improvements in the nomenclature, and made the system somewhat less incongruous. But no one had the faintest conception of what psychological analysis should be, its means, its conditions, and the problems it had first to solve. No one ever attempted to settle the all-important question, How to determine whether any mental manifestation is the direct product of a Faculty, or the indirect product of two or more Faculties? how to distinguish between Faculties and Modes, between elementary actions and associated actions, between energies and synergies? Not a step beyond rough approximative induction could be taken while this scientific basis was unsettled. Thus while the metaphysicians maintained that Memory, Judgment, Attention, and Will, were elementary Faculties, Gall maintained that they were only Modes of each Faculty; and Auguste Comte, in his modification of Gall's scheme, pronounces them to be Synergies of the intellectual Faculties only. Who is right? Obviously the decision can only issue from some clearly defined principle of analysis, biological or psychological, i.e. derived from decomposition of vital phenomena (as when the instinct of nutrition or the instinct of propagation is affiliated on a distinct physiological law) or derived from the decomposition of psychical phenomena (as when a complex act is resolved into its elementary constituents).

* COMBE: *System of Phrenology*, 3rd edit. p. 53.

Such a clearly defined principle was unsuspected by Gall. He accepted the rude indications of observation as sufficient. Observing that some men manifested a tendency to theft, which was not manifested with equal energy by all men, but which acted blindly and persistently, he at once concluded that there was a special organ for this special instinct. Spurzheim was acute enough to see that this instinct was less special, and that theft was the manifestation of acquisitiveness. In like manner, the faculty of Cunning was by Spurzheim reduced to the simpler faculty of Secretiveness, by eliminating the intellectual element which gave it the special character of Cunning, leaving thus the primitive instinct of Secretiveness. Again, Gall observing that some men were distinguished among their companions by the activity of their veneration, at once concluded that Veneration was an elementary faculty, though a very slight consideration of the phenomena might have shown him its composite nature. By an unfortunate coincidence, the convolution which Gall assigned to this faculty of Veneration in man, was found to be conspicuously prominent in sheep. A recent phrenologist explains this coincidence by affirming that the identity of organs in nowise determines identity of function in man and animals—a suicidal admission which he thus defends: If we analyse the mental phenomenon of Veneration, we find that it has two elements: 1, the abstract tendency to respect; 2, the idea of the object addressed. 'Tout acte de vénération humaine s'accomplit de cette manière et dérive de l'action combinée de circonvolutions dont plusieurs n'existent pas dans le mouton.'*

What function, then, has this organ in the sheep? M. Castle thinks that the gentleness and submission of the sheep are due to this instinct of veneration. Broussais sees in it the tendency of the flock to follow a leader.† The explanation seems plausible until we examine the brain of a lion or a tiger, and find the same organ there also. As M. Leuret

* CASTLE: *Phrénologie Spiritualiste*, 1862, p. 19.

† BROUSSAIS: *Cours de Phrénologie*.

pleasantly remarks, 'L'organe de la vénération pour ces derniers, il faut en convenir, est un organe parfaitement in-occupé.'*

It is to be observed that the phrenologists have been fully alive to the synergy of organs in producing mental phenomena, and have often displayed great acuteness in their indications of synergies; but what they have not done is to establish a principle which could decide whether any given manifestation were the direct function of an organ or the product of various organs. Hence their extremely questionable admission of Wit, Ideality, Colour, Individuality, and Eventuality as original faculties; while they reject others equally special, such as a Memory for Dates, or a Memory for Names. If observation suffice, surely the frequently-observed facts of some men being incapable of remembering important dates, such as the birthdays of their children, while other men seem to remember with facility dates the least important to them, ought to constitute a claim for the independence of an organ for Dates; the faculty being not more legitimately affiliated on Individuality or Eventuality than Wit is affiliated on Comparison.

Gall's criticism on the psychologists is effective. After enumerating their various and discordant schemes of the elementary faculties, he remarks, that whether the scheme includes two, three, four, or seven, the error is always the same, namely, that of mistaking abstractions for faculties. 'None of them designates an instinct, a propensity, a talent, or any definite moral or intellectual faculty. How can we explain by sensation, attention, comparison, reasoning, desire, the origin and exercise of such instincts as propagation, love of children, adhesiveness, the talents for mechanics, music, mathematics, poetry, &c.?' Go into a family and observe the strongly-marked disposition of its members: one is proud, the other servile; one is quarrelsome and destructive, the other timid and affectionate; one has an irresistible

* LEURET: *Anatomie Comparée du Système Nerveux*, 1839, i. p. 568.

propensity to steal, another to construct machines; one is surprisingly musical, and his brother cannot distinguish one tune from another. The same nursery, the same home, the same masters, the same companions, fail to produce similar characters in differently organised brothers and sisters. If education and surrounding circumstances, he asks, had the effect of determining the direction of the faculties and creating aptitudes—as people commonly suppose—how is it that the female bird does not sing like the male? Why do not chickens learn to coo like the pigeons they live with? Why does each species preserve its peculiarities? Above all, why do not animals suckled and reared by parents of another species, manifest the dispositions of their nurses? Would any companionship with philosophers develop in the juvenile athlete a power of seizing abstract relations and pursuing a long chain of reasoning by means of symbols? Would the society of a herd of antelopes develop in the ram the sensitive grace and agility of a deer? Hence the conclusion, confirmed by zoological comparison, that although we are not born with Innate Ideas, we have Connate Faculties and Aptitudes. But even this requires a qualification which Gall saw to be important, namely, that just as the newborn infant has not the maturity of organisation which permits the full performance of all physical functions—these gradually emerging as development goes on—neither has he the maturity of cerebral organisation which permits the performance of all the psychical functions; the Faculties grow and are developed; and their growth is dependent on the development of the organism.

Kant's great principle of seeking in the Laws of Thought a solution of the problems of Philosophy, was by Gall approached from the biological side. 'Si l'on reconnaît que les sens procurent des matériaux nombreux, que l'esprit travaille par le moyen d'instruments plus élevés, et si l'on peut établir que l'homme intérieur lui-même est doué d'une multitude de dispositions, nous devons chercher nos idées et nos connaissances en partie dans les phénomènes du monde

extérieur et dans leur emploi raisonné, et en partie dans les lois innées des facultés morales et intellectuelles.'* It is true that his attempt to discover these Laws was unsuccessful; but the attempt was made fertile by his conception of the necessity (not seen by Kant) of seeking the organic laws in the organism itself. Kant sought them in subjective analysis.

Gall further saw that not only must the Laws of Thought result from the Laws of the Organism, but that the plurality of Faculties which observation indicated as existing, necessarily implied a corresponding plurality of organs. To attribute the moral and intellectual faculties vaguely to the organism or the 'temperaments' was a sterile procedure. The organism as a whole does not see when the eye is removed, does not secrete bile or saliva when the liver or salivary gland is obstructed, nor does it think when the brain is obstructed. And if the physiological functions have each of them a separate organ, how can the psychical functions be without their separate organs?

Indeed all that relates to the general propositions respecting a plurality of functions, and a plurality of organs, Gall must be admitted to have triumphantly established. It is only in the details that he is unsuccessful.

§ V. VERIFICATION OF THE HYPOTHESIS.

Having indicated the chief points in the Method, I have now briefly to specify the chief reasons which determine the rejection of Gall's hypothesis. That it was a luminous and fertile conception, has been already acknowledged. Like all other conceptions, it had to be confronted with reality. After such a confrontation it would either pass from the condition of an hypothesis to that of a verified theory, or it would be relegated to the limbo of tentative failures. At the end of fifty years of attempted verification what is the result?

* *Fonctions*, i. p. 84.

The broad, palpable result to which I would first draw attention is that Phrenology, assailed by ridicule, misrepresentation, argument, and passionate contempt, such as usually salute every new and revolutionary hypothesis, has not survived this opposition, has not lived down its ill repute, and converted its antagonists, or the sons of its antagonists, but has lingered with a feeble life of sectarian tradition, inspiring no new prophets, raising up no influential disciples. If vehement opposition is, unhappily, one almost universal consequence of the promulgation of a new conception, there is, happily, another universal consequence of every promulgated truth, namely, that it spreads wider and wider, and irresistibly draws successive generations into its fold. Ridicule never killed any truth; persecution never finally suppressed it. The obstinacy of a few disciples prevents the sacred flame from dying out; by degrees it attracts more serious attention, and this attention discovers fresh evidence; the adhesion of serious minds checks the levity of superficial objectors; the ridicule ceases, and calm investigation proceeds. At this stage the new doctrine perishes, or rapidly passes into general acceptance.

How has Phrenology borne the test? Instead of surviving opposition it has decayed with the declining opposition. It has ceased to be ridiculed, it has ceased to be declaimed against as immoral, and it has ceased to occupy attention. While Science has accepted much of what is acceptable in Gall's method and results, no one has arisen to extend and improve those results, no school of phrenological investigators has kept pace with the discoveries of Anatomy and Physiology, nothing has been added to the labours of Gall, Spurzheim, and George Combe, nothing has been done to bring the doctrine into general acceptance. Here and there a clever man is found who accepts Phrenology; but he is generally (I think it may be said always) one imperfectly acquainted with the results of biological and psychological research. At any rate, not one among the eminent physiologists, psychologists; or physio-psychologists of the present day, accepts the

scheme as more than a rude hypothesis, while the vast majority reject it as a false hypothesis.

Such has been the result of fifty years' experience. Instead of gaining ground it has been losing ground. Verification has disproved, not confirmed, the hypothesis. Observation has not supported the Cranioscopy; nor has anatomical research confirmed the Physiology. The disproof is overwhelming, and on this account only has the doctrine sunk into neglect.

In the brief space to which these remarks must be restricted, I cannot, of course, pretend to marshal a tithe of the evidence which has been adduced in disproof. But there are certain crucial instances which would alone suffice to show that the hypothesis is unacceptable. I will begin with Cranioscopy, because that has not only the largest mass of facts in its favour, but is also the aspect of the hypothesis which phrenologists most resolutely advance. That the great diversities in mental manifestations may be correlated with the great diversities of cranial configuration is a proposition, probable in itself, and rendered almost certain by the facts phrenologists have collected. It is probable that every part of the physical organism carries with it the sign of some psychical peculiarity; could we only read that sign! And so long as phrenologists content themselves with discerning and registering all the cases of coincidence between certain manifestations and certain configurations, they are well employed. Such coincidences, however, must be rigidly determined, and, like all other empirical facts, must be held as mere sign-posts, until they be proved *universal*, and until they be bound together by some ascertained law. Now it will scarcely be denied that the observed correspondences between special cranial configuration and mental peculiarities, do, in many instances, fail. Proportionately large 'organs' are sometimes observed in connection with very mediocre powers; proportionately small 'organs,' on the contrary, with very splendid powers. I wish rather to understate than overstate the difficulty, and I will not seek to gain any advantage by multiplying exceptions; it is enough for the present

argument if any exceptions have been observed; because any exception to an empirical generalisation is fatal to it as an empirical generalisation, and can only be set aside when the generalisation has ceased to be empirical, and has become scientific. Thus, I am aware that phrenologists explain each exception to their perfect satisfaction. But, in explaining it, they quit the sphere of empirical observation to enter that of science; and thus their explanation itself has only the validity which can be given it by theory. To make my meaning more definite, let us suppose that the empirical generalisation of large chests being the cause of great muscular power, is under discussion. As an observed fact—an empirical fact—the correspondence of broad chests and muscular strength, is a valuable addition to our empirical knowledge. Taken as an indication, no one disputes the fact; but taken as a cause, and connected with a physiological theory, it bears quite a different value. The physiologist may say that the fact proves breadth of chest to admit of more perfect oxygenation of the blood, and thus causes greater muscular power. Against such a theory we bring the fact that no absolute and constant relation between broad chests and muscular power exists; if we find large chests accompanying strength we also find small chests in certain lithe, wiry frames accompanying even greater strength; the empirical generalisation is thus destroyed, the explanation is shown to be imperfect, and the ratio of muscular power is shown to depend on some other condition besides the oxygenation of the blood.

When phrenologists explain the exceptions to their empirical facts, they are on the field of pure science, and their explanations can only have value in proportion to the validity of the scientific principles invoked; and thus the Art of Cranioscopy is perpetually forced to recur to Physiology.

Considered empirically, we must say that the mass of observations hitherto collected establishes that a causal relation of some kind does exist between the conformation of the skull and the character. No one acquainted with

these observations will deny that they are far too numerous to be set down as mere coincidences; but they require much more precision, and, above all, they require a rational basis, before they can be accepted as more than empirical indications. If a hundred men having a given cranial configuration be found to manifest an unusual power of Calculation, and if a hundred men having very ordinary power of Calculation be found to possess nothing noticeable in the cranial configuration previously fixed on as related to Number, the conclusion inevitably is that a causal relation must exist between the configuration and the manifestation; but whether the causal relation is the one phrenologists have assigned is not proved by such observations; and should any one unequivocal exception be observed, it alone would suffice to prove that the relation was still to seek. This is a verdict of inductive Logic which has been strangely disregarded both by phrenologists and their opponents. The opponents of phrenology are too apt to argue as if the exceptional cases destroyed the cases of observed correspondence; the advocates of phrenology almost universally argue as if the exceptions were simply unexplained phenomena by no means impugning the legitimacy of their principles. They cling to the facts of correspondence, and, aware of the logical error of their opponents, aware that no amount of exceptional cases can destroy the evidence which proves a causal relation, have overlooked the equally imperative conclusion that one exceptional case points to an incompleteness in their generalisation; and where the exceptions are numerous the incompleteness must be great.

Now nothing is more certain than that observation in daily life, and observation of remarkable cases, disclose numerous and striking exceptions. The writings of anti-phrenologists abound in such. I will here mention but one, that of Mangiamele, the calculating boy, an excellent account of which is to be found in the work named below.* He was the

* LOUIS PIERRE: *La Médecine et les Médecins*, 1857. From my review of this work in *Blackwood's Magazine*, December, 1857, in an article entitled 'Phrenology

son of a Sicilian shepherd, and from infancy had given signs of a remarkable calculating power, although he had not been taught arithmetical methods, nor indeed anything of the science of Number. He was entirely self-taught; yet the rapidity with which he solved the most intricate arithmetical problems without the aid of graphic signs, was marvellous, and astounded the Académie des Sciences. Here was entirely a crucial instance for Phrenology: a faculty so exceptional in its vigour must have a corresponding development of its organ. But what was the fact? Instead of an eminence on that part of the skull assigned to the organ of Number, there was an absolute *depression*. The fact was admitted by the phrenologists; and indeed was too patent to be disputed; but Broussais and Dumortier endeavoured to evade it by affirming that Mangiamele had, in reality, no special development of the faculty of Number, he effected his marvellous feats of calculation by—genius, imagination, and extraordinary powers of induction and generalisation! The dilemma here is formidable; either the boy could subtract, divide, and multiply with astonishing rapidity and precision by means of his Causality, Comparison, Eventuality, Individuality (the organs invoked to explain his manifestations), in which case the organ of Number, established by Gall, on examination of heads of celebrated calculators, is a fiction and a superfluity, the functions being performed by other organs; or one organ may take upon itself vicariously the function of another, and all phrenological observation becomes doubtful. A man destitute of Tune may thus enchant the ears of Europe by means of his Causality; another may fill his house with the squalling children of his neighbours by the operation of his Comparison or Individuality. We can never say to what organ any action is due; and all the phrenological cases are discredited, on such a supposition. George Bidder is always cited as a clenching case of correspondence between calculating power and the configuration assigned to

in France, I have borrowed the account in the text. In the same article there are other striking cases.

Number. So far good. But now comes the case of Mangiamele, with powers not less remarkable, and on his skull there is a depression instead of an elevation. That is to say, the faculty is present in the absence of the organ—or, to speak more accurately, the faculty is enormous where the organ is unusually small.

Another and still more convincing example is that of the cerebellum assigned as the organ of amativeness, and considered by phrenologists to be one of the best established organs in their scheme, founded upon numerous facts of comparative anatomy, pathology, and common observation. It is only necessary to interrogate the works of comparative anatomists, physiologists, and pathologists, to see that the disproof of this hypothesis is overwhelming. What the functions of the cerebellum are, we do not know as yet; but one thing we positively know, and that is, that it is *not* the organ of sexual desire.*

I might take each organ in turn, and show that against the facts phrenologists adduce in its favour, an array of facts can be adduced against it, sufficient, if not to disprove altogether the cranioscopic hypothesis, at any rate to throw such doubt upon it as to be reconciled only by a rational explanation, which must come from a true psychological law. The rational explanation would either show the exceptional facts to be perturbations of the law; and these perturbations might or might not admit of reduction to some subsidiary law; or it would show that the generalisation itself was imperfect. In any case the facts observed preserve their value; both the facts against, and the facts in favour of the generalisation. That the counterfacts invoked by anti-phrenologists are not always of the nature of perturbations, but of direct contradictions, may be readily shown. Although inductive Logic refuses

* Even M. BOUILLAND, who accepts GALL's principles, but is unable to see the evidence for the localisations, and consequently rejects Cranioscopia, has recently declared, 'quant à la localisation de l'instinct de la génération dans le cervelet, je suis un de ceux qui l'ont combattue de la manière la plus résolue, mais toujours en respectant le principe fondamental de la pluralité et de la spécialité des organes cérébraux.' *Bulletin de l'Acad. de Médecine*, Avril 1865, p. 586.

to conclude against the cases of correspondence simply on the ground of cases of non-correspondence (perturbations), it forces us to conclude on the ground of direct contradiction. Let us consider the case of Mangiamele. Fifty examples of the organ of Number largely developed, without corresponding activity of the functional manifestation, would not disturb the value of the observed correspondences; for these imperfect manifestations may have been due to various perturbing causes. But one case of the presence of an unusual activity of the function in the absence of the organ, or rather in a remarkable deficiency of the organ, is a direct contradiction of the supposed relation between the function and the organ; and leads either to a relinquishment of the hypothesis, or dissolves the very basis on which phrenology is erected. For if functions can be active where the corresponding organs are deficient, or if one organ can take on the function of another, cranioscopic indication is fallacious.

It is, therefore, simply on the ground of non-correspondence with fact, as observed roughly in common, and as rigorously tested by the more precise methods of science, that Cranioscopy has failed to gain general acceptance. Phrenologists have collected cases with great assiduity; these present an imposing array; but scientific scepticism brought to their examination discloses fatal discrepancies. I say nothing of the loose way in which many of the phrenological facts are determined, though this alone would greatly diminish their presumptive value;* it is enough that daily observation,

* 'Au lieu d'employer le mètre et la balance dans un ordre de faits qui le comporteraient si bien, Gall et Spurzheim ont toujours et leurs partisans ont presque toujours préféré la simple inspection. Les mots "plus grand, plus petit, énormément développé, il est facile de voir" se retrouvent à chacune de leurs pages, mots très expressifs pour les hommes prévenus, mais qui dans la réalité n'ont le plus souvent aucune valeur.' LEURET: *Anatomie Comparée du Système Nerveux*, i. p. 430. To the same effect PARCHAPPE: *Recherches sur l'Encephale*, 1838, i. p. 10. The credulity of phrenologists is at times quite naïve. Gall mentions the case of a bookseller born blind, who had nevertheless, by means of his organ of colour, precise notions of the distinction and harmony of colours' (*Fonctions*, v. p. 85); and Mr. George Combe, not in the least sceptical of such a 'fact,' records that he also knew 'a blind man who distinguished colours with great accuracy

practising the *same* loose methods of determination, constantly alights on glaring discrepancies; and that scientific observation, guided by precise methods, uniformly discredits the phrenological localisations.

But Cranioscopy might be true, or sufficiently true to warrant the acceptance of its facts of correspondence between cranial configuration and mental manifestations, yet Phrenology, or the Physiology of the Brain which has hitherto formed its scientific basis, might be very far from true. Gall indeed supposed otherwise. He maintained that it was purely by cranioscopic indications we could determine the cerebral functions.* Unless the organs were all situated at the surface of the brain, and (note this point!) *were limited within the superficial limits*, Cranioscopy could be no more than Physiognomy, a rough indication of general conditions, not an anatomical guide to functions. In other words, the basis of Phrenology rests on four positions:

1. That the grey matter of the convolutions is the organic substance of all psychical actions.
2. That no other part of the nervous system has any essential connection with the mind.
3. That each distinct faculty has its distinct organ.
4. That each organ is a limited area of grey matter.

Of these four fundamental positions, only the third is true, and even that is left in vagueness, for Gall nowhere determines what constitutes a Faculty, he nowhere describes an Organ. The other three are all more or less false. If it is mainly to Gall's impulsion that science owes the definite notions which enable us to reject his hypothesis, we must pay him our tribute even while rejecting his views. There is nothing derogatory to him in asserting that his knowledge of the nervous system was incomplete, and that he had very imperfect notions of what, strictly speaking, constituted an

by means of touch' (*Phrenology*, p. 413). Could not Mr. Combe detect the difference between distinguishing colours and distinguishing coloured objects? the one being beyond the sense of touch, the other being simply fineness of touch.

* *Fonctions*, iii. pp. 2, 4.

Organ. On the latter point, Biology is still without a satisfactory definition; and many biologists confound *properties of tissue* with *functions of organs*. Having made this general remark, I will proceed to show, briefly, yet it is to be hoped conclusively, the untenableness of Gall's cerebral views.

1. *The grey matter of the convolutions.* 'L'on sait que les fonctions, propres à chaque système de nerfs, sont réalisées dans leur expansion périphérique; or j'ai démontré que les circonvolutions du cerveau ne sont autre chose que l'expansion périphérique des faisceaux dont il se compose; par conséquent, les circonvolutions du cerveau doivent être reconnues pour les parties où s'exercent les instincts, les sentimens, les penchans, les talens, en général les forces morales et intellectuelles.' *

Waiving for the present all consideration of the second proposition, which excludes every other portion of the nervous system, and limits psychical functions to the convolutions of the cerebrum and cerebellum, I remark that Gall altogether fails to seize the distinction between functions and properties of tissue, and consequently makes no attempt to define each cerebral organ, beyond the limitation of a given superficial area in an *uniform* substance. The *properties* of the velvet (to recur to our former illustration) depend on the structure of the velvet; the *uses* to which that velvet is put are in no sense determined by the *folds* in the velvet, but by the *connections* of each part with other parts: thus the skirt, boddice, sleeves, wristbands, and waistband, are various distinct parts of the velvet dress, but the properties of the velvet do not vary with this variation of the uses which they subserve. It is the same with the grey matter of the brain: that also is an uniform substance, variously folded into convolutions, and variously connected with different parts of the organism; the special *property* of this uniform substance is Sensibility; the special *functions* subserved by it, depend upon its organic connections. In connection with the various Senses, its functions will be perceptions of Sight, Sound, Touch, Smell, and Taste. In connection with visceral organs, its functions

* *Fonctions*, ii. p. 13.

will be perceptions of systemic sensations. In connection with muscular organs, its functions will be volitional. The brain has often been compared to a galvanic battery.- Let us adopt the comparison. On the ends of the two conducting wires, two pieces of charcoal are fixed, and the result is the electric light; the two conductors are placed in a solution, and the result is a chemical decomposition; the two conductors are placed in a mixture of gases, and the result is a chemical composition; the conductors are placed in relation with a telegraphic apparatus, and the result is a transmission of a message from one country to another. But all these various results have been due to the various *applications* of the electric force, they have not been due to varieties in the battery. By no inspection of the battery could these results have been divined; by no numeration of the several galvanic couples could these phenomena have been discriminated. The phenomena did not wholly depend on the plates of zinc and copper; they did not at all depend upon the relative positions of those couples in the battery; and yet to enumerate the various convolutions of the cerebrum, and affix to each, and to separate areas of each, the various functions of the mind, is as unscientific as to assign the electric light to one couple, the telegraph to another, and the chemical decomposition to a third couple, irrespective of their connections.

Of this Gall had no suspicion. As I have said, he had the vaguest ideas of what constituted an organ; and although he declared, and truly declared, that the faculties, being separate, required separate organs, he nowhere endeavours to demonstrate a cerebral organ. At one time he seems to consider it a bundle of fibres; at another a single fibre. That it could be *neither* he never suspected. 'Le cerveau consistant en plusieurs divisions dont les fonctions sont totalement différentes, il existe plusieurs faisceaux primitifs, qui par leur développement contribuent à le produire conformément aux lois auxquelles obéissent les autres systèmes . . . nous rangeons parmi les faisceaux les pyramides antérieures et postérieures, les faisceaux qui sortent immédiatement des corps olivaires,

et encore quelques autres.* Granting the hypothesis, we should have to remark first, that the bundles were too few for the seven-and-twenty faculties; and secondly, that these bundles are not to be discriminated on the area of the convolutions. Subsequently, he was disposed to regard every fibre in the nerves, or in the brain, as a little organ by itself.† The conception of a fibre or a bundle of fibres constituting an organ, will surprise the philosophic biologist.

It seems to me, that the objection which arises from the preceding exposition is fatal to Gall's scheme. He affirmed that the brain was not a single organ having a single function, but a complex unity of various organs having diverse functions. He established this position by an overwhelming array of evidence. But when he came to take the next step, and assign each function to its particular organ in the brain, he was wholly without a principle of determination, he neither conceived steadily what an organ was, nor attempted anatomically to discriminate the parts of the brain that each organ involved.‡ Considering that there are some sixty distinct parts in the whole encephalon, each of which has received its distinct name, we were surely in need of some guide which would lead us amid the labyrinth, and point out which parts were severally grouped into distinct organs? Gall, who revolutionised the mode of dissecting the brain, had no better guide than what cranial configurations might suggest. The internal structure of this eminently complex apparatus was to be disregarded; and our attention fixed on the variations of the surface. One might as reasonably

* GALL: *Anat. et Physiol. du Système Nerveux*, i. p. 271. To the same effect SPURZHEIM: *Observations sur la Phrénologie*, pp. 74, 94.

† *Op. cit.* iv. p. 8.

‡ M. PARCHAPPE has well remarked, 'Il est singulier que Gall tout en perfectionnant l'anatomie du système nerveux par d'importants travaux qui constituent son titre scientifique le plus glorieux, n'ait pas fait porter ses recherches sur les points qui eussent précisément pu servir à vérifier la légitimité de son système, s'il avait pu démontrer que la périphérie des hémisphères cérébraux se décompose effectivement en organes distincts, correspondant aux fonctions distinctes dont il admettait l'existence.' *Bulletin de l'Acad. de Médecine*, mai 1865, p. 684.

explain the mechanism of the clock by the position of the figures on its dial.

The subject of the convolutions is one which might furnish an instructive chapter, did space permit; but I must content myself with affirming that the researches of anatomists have disproved every point advanced by Gall. Curiously enough, M. Camille Dareste has placed beyond dispute the fact, that the number and depth of the convolutions bear *no* direct proportion to the development of intelligence, whereas they *do* bear a direct proportion to the size of the animal. Thus, given the size of the animal in any genus, and he can predict what are its convolutions; or vice versa, given the convolutions, and he can predict the size of the animal. 'Toutes les espèces à cerveau lisse ont une petite taille; toutes les espèces à circonvolutions nombreuses et compliquées sont, au contraire, de grande taille.*

In a word, the convolutions cannot be accepted as the 'organs' of the faculties; nor even as correctly indicating the organs. They are simply folds of an uniform tissue; this tissue has a peculiar property, Sensibility, which applied in different connections serves various functions; but the *organs constituted out of these connected parts* are no more to be identified with the particular portions of the vesicular tissue which supply their Sensibility, than the telegraph is to be identified with the plates which supply its electricity. Thus it is that the area of convolution which in one man might be connected with a peculiar mechanism, in another might be so imperfectly connected with that mechanism, or might supply so imperfect a mechanism, that the results would be different or even opposed. Of this Cranioscopy can tell nothing. It is limited to the surface. And hence it is that the skull is considered sufficient evidence. The surface of the skull tells as much as the surface of the brain; as much and as little.

I will merely in passing observe, that the axiom of which so much use is made by phrenologists, 'other things equal,

* *Annales des Sciences Naturelles*, 3ième série xvii. 30 and 4ième série i. 73.
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size is the measure of power,' though indisputable, is fallacious, since the 'other things' never are equal. If the external indications were expressions of the internal structure, size would be a measure of power, and Cranioscopy a guide to character: unhappily it is not so.

Let us now pass to the second position on which Phrenology is based, that the cerebrum only is the seat of the psychical faculties. Gall has here the vast majority of biologists on his side. There is scarcely one teacher in a hundred who does not declare the Brain, and the Brain exclusively, to be the organ of the mind. I have elsewhere* marshalled abundant facts and arguments in disproof of this illogical and obstructive hypothesis; but for the present it is enough to point out that Gall was in opposition to his own principles when he thus limited the seat of psychical faculties. In opposition to logic, for he thereby implied that community of structure did not carry community of property: implied that ganglia in one part of the system had not the same Sensibility as ganglia in another. In opposition to zoological observation, for he thereby implied that the instincts and propensities exhibited by animals with brains could not be manifested by animals without brains, whereas it is notorious that the instinct of propagation, the instinct of destructiveness, the instinct of constructiveness, and others, are manifested by animals having no brains, nothing but simple ganglia.

He had indeed a glimpse of the logical error when he was treating of the grey substance of the convolutions as the origin of the nerves, for he there asks 'pourquoi auroit-elle dans le cerveau une destination différente de celle qu'elle a dans les autres systèmes nerveux?'† Had he not been

* *Physiology of Common Life*, vol. ii. RUDOLPH WAGNER finds himself compelled by the evidence of experiment to retract his former views and to admit the existence of psychical manifestations in the absence of the brain. 'Je reconnais même qu'un certain nombre de phénomènes psychiques persistent chez les pigeons auxquels on a enlevé le cerveau, le cervelet, et une partie du mésocéphale.' *Brown-Séquard's Journal de la Physiologie*, 1861, iv. 551. My experiments on reptiles and insects showed the persistence of psychical manifestations after the head had been cut off.

† GALL: *Anat. et phys.* i. 242.

misled by his hypothesis of the nutritive office of the vesicular substance (long since refuted), and had he conceived Sensibility as the property of this tissue, he would have reversed his question and asked, 'Why has this tissue Sensibility in the convolutions, and not in every other ganglionic mass?'

Gall's principles demanded that the subjective analysis should correspond with the biological analysis, and that mental manifestations should be affiliated on the physical organs; but his Cranioscopy could not accommodate itself to such a procedure: it demanded that the cerebrum should be the exclusive seat of the psychical faculties, and that the surface of the cerebrum should in its varieties reveal the organs of those faculties.

If the reader has followed these few pages with assent, he will see that the basis of Phrenology is laid on shifting sand; and that if men of science have long since declined to occupy themselves with the hypothesis, it is because the alleged facts of Cranioscopy are not found to be sufficiently accurate and general to warrant confidence in that Art, and because the Psychology and Physiology which Gall and his successors offer us, are neither reconcileable with psychological analysis, nor with the present condition of Anatomy and Physiology.*

The course of our History now leads us to the important movement in Germany, which, begun by Kant, ran a rapid and brilliant career till it came to a crisis in the Hegelian school. I have placed Gall before Kant, although chronology is thereby somewhat disturbed, in order that from Kant the course of evolution might be followed without interruption.

* Space has not permitted the citation of a tithe of the arguments and observations which discredit Phrenology. The student is referred to LÉLUT: *Rejet de l'Organologie*, and his subsequent work *La Physiologie de la Pensée*, for conclusive examples against the special localisations; also to PEISSE, *La Médecine et les Médecins*. With regard to Anatomy and Physiology almost any and every modern work may be consulted; but LEURET and GRATIOT, *Anatomie Comparée du Système Nerveux*; or WAGNER, *Neurologische Untersuchungen*, may be specially named, the former abounding in facts drawn from comparative anatomy, which admit of no escape.

NINTH EPOCH.

*Recurrence to the fundamental question respecting the
Origin of Knowledge.*

CHAPTER I.

KANT.

§ I. LIFE OF KANT.

IMMANUEL KANT was born at Königsberg, in Prussia, 22nd of April, 1724. His family came originally from Scotland, and changed their name of Cant into Kant to suit the German pronunciation. This Scottish origin, when taken in conjunction with his philosophical connection with Hume, has some little interest. His father was a saddler, a man of tried integrity. His mother was somewhat severe, but upright, speaking the truth, and exacting it. Kant was early bred in a love of truth and had before him such examples of moral worth as must materially have contributed to form his own inflexible principles.

Madame de Staël has remarked, that there is scarcely another example, except in Grecian history, of a life so rigorously philosophical as that of Kant. He lived to a great age, and never once quitted the snows of murky Königsberg. There he passed a calm and happy existence, meditating, professing, and writing. He had mastered all the sciences; he had studied languages, and cultivated literature. He lived and died a type of the German Professor: he rose, smoked, drank his coffee, wrote, lectured, took his daily walk

always at precisely the same hour. The cathedral clock, it was said, was not more punctual in its movements than Immanuel Kant.*

He was early sent to the University. There he began and there he ended his career. Mathematics and physics principally occupied his attention at first; and the success with which he pursued these studies soon manifested itself in various publications. He predicted the existence of the planet Uranus; and Herschel himself, after discovering it, admitted Kant's having first announced it.

But none of these publications attracted much attention till the renown of his *Critique of Pure Reason* had made everything produced by him a matter of interest. Nor did the *Critique* itself attract notice at first. The novelty of its views, the repulsiveness of its terminology and style, for some time obscured its real value. This value was at length discovered and made known. All Germany rang with praises of the new philosophy. Almost every 'chair' was filled by a Kantist. Numberless books and not a few pamphlets came rapidly from the press, either attacking or defending the principles of the Critical Philosophy. Kant had likened himself to Copernicus. The disciples likened him both to Copernicus and Newton, declaring that he had not only changed the whole science of Metaphysics, as Copernicus changed the science of Astronomy, but had also consummated the science he originated.

The *Critique* was, he tells us, the product of twelve years' meditation. It was written in less than five months. These two facts sufficiently explain the defects of its composition. In his long meditations he had elaborated his system, divided and subdivided it, and completed its heavy and useless terminology. In the rapidity of composition he had no time for the graces of style, nor for that all-important clearness of structure which (depending as it does upon the due gradation of the parts, and upon the clearness with which the parts

* He mentions having once been kept two or three days from his promenade by reading Rousseau's *Émile*, which had just appeared.

themselves are conceived) may be regarded as the great desideratum of a philosophical style.

But in spite of these defects—defects which would have been pardoned by no public but a German public—the *Critique* became celebrated, and its author had to endure the penalty of celebrity. He was pestered with numerous calls of curious strangers, who would not leave Königsberg without having seen him. To the curious were added the admiring. Enthusiastic scholars undertook long journeys to see their great master. Professor Reuss one day walked into his study, saying brusquely that 'he had travelled a hundred and sixty miles to see and speak with Kant.' The visits became so numerous, that in the latter part of his life he contented himself with merely showing himself at the door of his study for a few minutes.

Kant never spoke of his own system, and from his house the subject was entirely banished. He scarcely read any of the attacks on his works: he had enough of Philosophy in his study and lecture-room, and was glad to escape from it to the topics of the day.

He died on the 12th of February, 1804, in the eightieth year of his age, retaining his powers almost to the last. He latterly, during his illness, talked much of his approaching end. 'I do not fear death,' he said, 'for I know how to die. I assure you that if I knew this night was to be my last, I would raise my hands, and say "God be praised!"' The case would be far different if I had ever caused the misery of any of his creatures.'

A picture of Kant's daily habits, and many interesting traits of his character, will be found in the works named below.* I cannot find space for such details; nor for more than a passing mention of Kant's relation to Swedenborg, of

* BOROWSKI: *Darstellung des Lebens und Charakter Immanuel Kant's*, 1804. A biography revised by KANT himself, though not published during his lifetime. WASIANSKI: *Immanuel Kant in seinem letzten Lebensjahre*, 1804. This has been reproduced by DE QUINCEY: *Works*, iii., 'Last Days of Immanuel Kant,' where the English reader will do well to seek it. SCHUBERT: *Kant's Biographie* in the edition of Kant's works by ROSENKRANZ and SCHUBERT.

which such unjustifiable use is often made by the admirers of the latter, who proclaim, with emphasis, that Kant testified to the truth of Swedenborg's *clairvoyance*. He did nothing of the kind. In his *Letter on Swedenborg** he narrates two of the *reported* cases of Swedenborg's *clairvoyance*, and says he knows not how to disprove them, they being supported by such respectable testimony; but he nowhere testifies to them himself; and in the *Anthropologie*, §§ 35 and 37,† his energetic contempt for Swedenborgianism and all other *Schwärmerei* is unequivocally expressed.

§ II. THE CRITICAL PHILOSOPHY.

Kant was undoubtedly one of the profoundest of thinkers, and produced so deep and agitating an impression on the mind of Europe, that he may be said to have given a new aspect to several of the fundamental questions of Metaphysics; yet there was nothing new in his Method, and little that was absolutely new in his results. Previous thinkers had reached similar results; but there was a novelty in the systematic precision of his results which gave them a clearness that amounted to a revelation. When we have translated his technical and often cumbrous terminology into ordinary language, we find the thought a familiar one; but we also find that Kant has given it a sharpness of definition which renders it unforgettable, and that he has shown its unsuspected relations to other thoughts. How much of his influence may be due to the very novelty and obscurity of his exposition, it would be difficult to estimate. Undoubtedly the form is at first repulsive; but those whom it does not wholly repel it finally fascinates. The history of Philosophy is indeed, to a great extent, a history of the fascination exercised by phrases. Students begin by declaiming against Kant's style, are piqued into vanquishing its difficulties, and end in overvaluing their difficult conquest.

* *Kleine Anthropologische Schriften* (Theil vii. p. 5, ed. ROSENKRANZ).

† *Zweite Abtheil.* p. 89 sq.

As I shall have to express dissent at almost every turn, I must be allowed to begin my exposition with an emphatic expression of deep veneration for the mighty intellect which produced the *Critique of Pure Reason*. But it is only as a thinker, not as a writer, that Kant deserves applause. Speaking from a tolerably extensive acquaintance with philosophic literature, I cannot name a work of real power which exhibits such an utter disregard of every condition of good style as is exhibited by the *Kritik*. Its terminology is the least of its offences. Its composition is disgraceful. The sentences are long, clumsy and involved; the separate clauses are seldom well constructed, and these clauses are rather thrown together than logically subordinated. Approximative expression and bad construction render it inexpressibly fatiguing. To find a rival to it, we must go back to the work of Archimedes, where that great geometer has set forth propositions which require to be read several times before the student seizes the meaning of the proposition to be demonstrated. As a critic remarks: 'Avant d'arriver à la fin on a oublié le commencement. Il faut les relire bien des fois avant de comprendre quelle est la proposition à démontrer. On peut juger quelle sera la difficulté de suivre tout le développement de la démonstration même, et quelle a surtout été celle de la découvrir à moins que ce grand géomètre n'ait employé des signes abrégatifs qu'il n'ait pas fait connaître.'* Kant defends himself by assuming that it is the absence of 'popularity' and 'entertainment' which caused men to dip into and not read the *Kritik*; and he has an easy retort against any philosopher who should demand such qualities.† But the objection had a deeper source. And the proof of it is seen in the singular misapprehension of his meaning which is frequently exhibited by men thoroughly versed in metaphysical speculations, and careful students of his work. It is not enough to point to men like Sir

* DUHAMEL: *Des Méthodes dans les sciences de raisonnement*, 1865, p. 88.

† *Prolegomena zu jeder künftigen Metaphysik*, Werke, ed. HARTENSTEIN, iii. p. 172.

W. Hamilton, Mr. Mansel and Victor Cousin, who are arraigned as having flagrantly misunderstood him on certain points; but among the Germans, nay among the Kantians themselves, there is perpetual controversy as to what his meaning was. So little *composition* is there in the *Kritik* that a controversy has arisen, and is yet far from settled, respecting the changes in doctrine, as well as in exposition, introduced in the second edition of the *Kritik*. Michelet, Schopenhauer, and Kuno Fischer affirm a radical change; Ueberweg and Mr. Mahaffy affirm complete consistency.*

Kant never writes well; but he is intelligible in other works, and repulsive only in the *Kritik*. On this account, and on others, the student is advised to leave that work in peace until he has, from other sources, mastered the Kantian principles; which may easily be done by some such course as this: Beginning with Mr. Mansel's *Prolegomena Logica*, and Victor Cousin's *Leçons sur Kant*, he may take in hand Apelt's *Metaphysik*, which reproduces the Kantian ideas in a clear style; he is then fitted for Kant's *Prolegomena*, which is a popular exposition expressly written to make the *Kritik* intelligible.†

There are several parts of the system which, although occupying students of German Philosophy and interesting in relation to Kant, need not be touched on here, since they hardly come within the course of historical evolution. Even on those points which it is necessary for me to consider I must be briefer than I should desire.

From Spinoza to Kant the great question we have seen to be this: Have we any ideas which can be accepted as ob-

* KUNO FISCHER: *Commentary on Kant's Kritik*. Translated by J. P. MAHAFFY, 1866. UEBERWEG: *De priore et posteriore forma Kantianæ Criticæ Rationis Puræ*, 1861, and *System der Logik*, 1865.

† 'It describes the way in which Kant reached his discoveries. It shows the whole critical investigation in its natural untrammelled course, and therefore not only shows us but facilitates our view of the inner construction of the critical philosophy.' KUNO FISCHER, *op. cit.* 24. This work, which would be easily intelligible to the English public, has not found a translator, whereas the *Kritik*, on all grounds repulsive, has been several times translated. I shall occasionally avail myself of the meritorious version by Mr MEIKLEJOHN published in *Bohn's Philosophical Library*.

jective truths, and which, removed from the possible illusions of the senses and the understanding, may be made the basis of a Philosophy revealing the realities of existence?

This question, variously answered, resolved itself into the more definite question: Have we any ideas independent of Experience?

It had become evident that before we could determine the objective value of our knowledge we were bound to investigate the nature and conditions of the knowing faculties. Ontology thus was for a time superseded by Psychology. The attempts to settle the psychological question have already been exhibited in our chapters on Locke, Hume, the Sensational School, the Scotch School, and Gall. All these proclaim Experience the foundation of knowledge: and yet inasmuch as Experience led irresistibly to Scepticism this was a dilemma which seemed only to be avoided by seeking refuge in Common Sense, i.e. a denial of Philosophy. Kant declined this refuge.* He saw two conceptions of the world to be logically tenable: Materialism and Scepticism: he rejected both, and strove to reconcile what was true in both with what was true in the *à priori* doctrine. He called his system a *Criticism*. His object was to examine into the nature of this Experience which led to Scepticism. While men were agreed that Experience was the source of all knowledge, Kant asked himself, What is this Experience?—What are its Elements?

The problem he set himself to solve was but a new aspect of the problem of Locke's *Essay*. On this deep and intricate question of human knowledge two opposite parties had been formed—the one declaring that all our knowledge was given in Experience, and that all the materials were derived from Sensation, and Reflection upon those materials; the other declaring that these only furnished a portion of our knowledge. This second party maintained that there were

* He said it was the notable invention of modern times whereby the emptiest noodle could place himself on a level with the profoundest thinker. *Prolegomena*: Vorrede, Werke, iii. 170.

elements of knowledge which not only were never derived from sensation, but which absolutely *transcended* all sensation. Such, for instance, is the idea of Substance. Experience only informs us of *qualities*: to these qualities we add a substratum which we call Substance; and this idea of a substratum, which we are *compelled* to add, Locke himself confesses we never gained through any sensation of matter. Other ideas, such as Causality, Infinity, Eternity, etc., are also independent of Experience: *ergo*, said this school, antecedent to it.

In the course of inquiry, the untenableness of the theory of innate ideas had become apparent. Descartes himself, when closely pressed by his adversaries, gave it up. Still the fact of our possessing ideas apparently *not* derivable from experience, remained: and this fact was to be explained. To explain it, Leibnitz asserted that although all knowledge *begins with* Sensation, it is not all *derived from* Sensation; the mind furnishes its quota; and what it furnishes has the character of universality, necessity, consequently of truth, stamped on it. This doctrine, slightly modified, is popularly known as the doctrine of 'original instincts'—of 'Fundamental Laws of Belief.'

Kant also recognized the fact insisted on by the adversaries of the Sensational School; and this fact he set himself carefully to examine. His first object was therefore a Criticism of the operations of the mind.

Kant considered that his conception of a purely critical philosophy was entirely original.* No one before him had thought of thus subjecting Reason itself to a thoroughly critical investigation, in order to reach answers to such questions as: Are *à priori* synthetic judgments possible? Is a science of Metaphysics possible? And here may be noted an illustration of what was said at the opening of this section respecting Kant's originality. Certainly no one had isolated the *à priori* elements of knowledge from those given in Experience, as Kant isolated them, to build a system thereon; never-

* And Sir W. HAMILTON repeats the statement: *Discussions*, p. 15.

theless the whole tendency of speculative development since Hobbes, had been, as we have seen, towards the investigation of the grounds of certitude, i. e. towards a criticism of the knowing faculties.

On interrogating his Consciousness, Kant found that neither of the two ordinary explanations would account for the phenomena: certain ideas, such as Time, Space, Causality, etc., could not be resolved into Experience alone: nor, on the other hand, although *à priori*, could they be supposed absolutely independent of Experience, being as it were only the forms (necessary conditions) of our Experience.

There are not two sources of knowledge, said he: on the one side external objects, and on the other human understanding. Knowledge has but one source, and that is the union of object and subject: it is the function of two coefficients. Thus, water is the union of oxygen and hydrogen; but you cannot say that water has two causes, oxygen and hydrogen; these are its conditions (*Bedingungen*), its coefficients; it has only one cause, namely, the union of the two.

In this conception the existence of the two distinct factors is assumed. 'That all our knowledge begins with Experience,' he says, 'there can be no doubt. For how is it possible that the faculty of cognition should be awakened into exercise otherwise than by means of objects which affect our senses, and partly of themselves produce representations (*Vorstellungen*), partly rouse our powers of understanding into activity, to compare, to connect, or to separate these, and so to convert the raw material of our sensuous impressions into a knowledge of objects which is called Experience? In respect of time, therefore, no knowledge of ours is antecedent to Experience, but begins with it. But although all our knowledge begins with Experience, it by no means follows that all arises out of Experience. For, on the contrary, it is quite possible that our empirical knowledge (*Erfahrungserkenntnis*) is a compound of that which we receive through impressions, and that which the faculty of

cognition supplies from itself (sensuous impressions giving merely the *occasion*), an addition which we cannot distinguish from the original element given by sense, till long practice has made us attentive to and skilful in separating it. It is therefore a question which requires close investigation, and is not to be answered at first sight—whether there exists a knowledge altogether independent of Experience, and even of all sensuous impressions.*

Kant compares the revolution he effected in Philosophy to the revolution Copernicus effected in Astronomy. This claim has been generally, but I think inconsiderately, admitted. The survey Kant takes of the development of Science seems to me altogether misdirected. He asks how it is that Mathematics and Physics have been perfected. 'Thales, or whoever he was, who first demonstrated the right-angled triangle, had a luminous conception; for he found that it was not by contemplating the figure before him or deducing its properties from his concept of the figure, but found that it was necessary to bring out these properties constructed by him *à priori*, and that to arrive at *à priori* certainty he must not attribute to the object any other properties than those necessarily deduced from the concept he had formed.†

Now this, which may be the legitimate process in Mathematics, is not only an illusory process in Physics, but is the process which was actually followed until the rise of the Objective Method came to discredit it for ever. Mathematics is deductive and *à priori*; and it was because the early physicists tried to construct their science on the same *à priori* method that they failed egregiously. Kant, referring to Galileo and Torricelli, affirms that they also proceeded on this Subjective Method. 'They learned that Reason only sees that which it produces according to its own scheme (*was sie selbst nach ihrem Entwurfe hervorbringt*); that it must advance with principles of judgment according to invariable laws compelling Nature to answer its questions, and not allow itself to follow

* *Kritik: Einleitung.* (MEIKLEJOHN'S trans. p. I.)

† *Kritik: Vorrede zur zweiten Ausgabe, Werke, ii. 14.*

Nature's lead. Reason, in short, is to dictate to Nature as a master, not obey her as a pupil; and Physics, we are told, owes its revolution to this luminous idea! To make Metaphysics a progressive study, he conceived that a similar revolution was necessary. Hitherto men had assumed that knowledge should accommodate itself to external objects; he now proposed to reverse this procedure, and assume that objects obeyed the laws of knowledge.*

He calls this system critical, because it is founded on an examination of our cognitive faculties, and compares his point of view with that of Copernicus. But Copernicus positively changed the point of view. Kant did nothing of the kind: his attempt to deduce the laws of the phenomenal world from the laws of mind, only gave greater precision to the attempt of Descartes to deduce the world from Consciousness; it was the same as the attempts of Leibnitz and Berkeley in method; and the *result* was very much the result obtained by Hume, namely, that we can know nothing but our own ideas, we can never know things *per se*. Kant, after analyzing the operations of the mind, discovered indeed certain principles of certitude; but he admitted that those principles could not be applied to things *beyond* the mind; and that all within the sphere of our cognition was no more than phenomenal. He reviews his investigation, and then, declaring that he has gone the round of the domain of human Understanding and measured it exactly, he is still forced to admit that that domain is only an island. Nature has assigned to it invariable limits. It is the empire of Truth; but it is surrounded by a stormy and illimitable sea, upon which we discover nothing but illusions. There, on that sea, the navigator, deceived by masses of ice which appear and disappear successively before him, believing that at every moment he is about to discover land, wanders without repose, guided only by one hope; he is the plaything of the stormy

* 'Bisher nahm man an alle unsere Erkenntniss müsse sich nach den Gegenständen richten . . . man versuche es daher einmal, dass wir annehmen, die Gegenstände müssen sich nach unserem Erkenntniss richten.'—*Loc. cit.* p. 17.

waves, always forming new plans, always preparing himself for new experiences, which he cannot renounce, and yet which he can never obtain.

To the Sceptic Kant says, 'No: experience is not a deceit; human Understanding has its fixed laws, and those laws are true.'

To the Dogmatist he says, 'But this Understanding can never know Things *per se*. It is occupied solely with its own Ideas. It perceives only the Appearances of Things. How would it be possible to know Noumena? By stripping them of the *forms* which our Sensibility and Understanding have impressed upon them (*i. e.* by making them cease to be Appearances). But to strip them of these forms, we must annihilate Consciousness—we must substitute for our Sensibility and Understanding, a faculty, or faculties, capable of perceiving Things *per se*. This, it is obvious, we cannot do. Our only means of communication with objects are precisely this Sensibility and this Understanding, which give to objects the forms under which we know them.'

To the Dogmatist, therefore, Kant's reply is virtually the same as Hume's. He proves that the Understanding, from the very nature of its constitution, cannot know Things *per se*. The question then arises, Have we any other Faculty capable of knowing Things *per se*? The answer is decisive, We have *no* such Faculty.

The difference between Hume and Kant, when deeply considered, is this:—Hume said that the Understanding was treacherous, and, as such, it rendered Philosophy impossible. Kant said that the Understanding was not treacherous, but limited; it was to be trusted as far as it went, but it *could* not go far enough; it was so circumscribed that Ontology was impossible.

The reader is, we trust, now prepared to follow with interest the leading points of Kant's analysis of the mind. In giving an indication of the *result* of that analysis, before giving the analysis itself, we hope to have so far interested him that he will read the analysis with sharpened attention.

Two points must first be settled: namely, the distinction between analytic and synthetic judgments; and the distinction between *à priori* and *à posteriori* judgments. These have played a great part in modern Philosophy, and they are illustrations of the tendency (already noted in our *Prolegomena*) to confuse questions of Morphology with questions of Anatomy, questions of Metaphysics with questions of Logic. Let us follow Kant's exposition.

Analytic judgments are those which merely write out and explain our experience, but add nothing to our store (*Erläuterungsurtheile*); thus when we say that 'Body is extended,' or that a triangle is 'a figure with three sides,' the judgment is analytic: the attribute of extension being involved in our conception of Body, and the attribute of three-sidedness being involved in our conception of a triangle. But synthetic judgments predicate some attribute not involved in the conception of the object, and they *extend* our experience by this addition (*Erweiterungsurtheile*); as when we say that 'a straight line is the shortest path between two points,' the conception of a straight line not involving that of a shortest path; again, when we say 'all bodies are heavy,' the judgment is synthetic because the predicate 'weight' is not a mere writing out of our conception of bodies, it is something added to that conception.

A priori judgments are those which are not derived from experience, but belong to the native structure of the mind, which structure is one of the conditions (*Bedingungen*) of experience, rendering it possible. *A posteriori* judgments are those derived from experience: that is to say, products of the mind and external objects, the functions of these two coefficients.

A synthetic *à priori* judgment is one which experience may confirm but cannot originate, as when we say that 'a straight line is the shortest path between two points,' which is a truth independent of experience, having a necessity and universality which experience cannot bestow, for although experience may show how a straight line is in numerous

cases the shortest path, it cannot show that there is absolutely nowhere a shorter path between two points. A synthetic *à posteriori* judgment is one resulting from our experience, as when we say: Gold is ductible, we must already know from experience that gold is ductible before we can predicate ductility of gold.

Such in brief is Kant's teaching. As a logical division, this of analytic and synthetic may have its uses; all well-marked distinctions, even if purely verbal, are aids to thought; but unhappily, like other aids, they become obstacles when their artificial nature is forgotten, and verbal differences are accepted as real. Such seems to me to have been the case here. Kant regards the distinction as the keystone of the arch. He admits that it can have little use elsewhere, but says that in reference to the criticism of human understanding it is indispensable.*

Logically, analytic judgments are concepts, synthetic judgments are the union of concepts. But psychologically, the concept itself is a synthesis, i.e. the *integration of perceptions*, or their combination into a whole.†

Psychologically, synthetic judgments are only analytic judgments *in the making*: they differ as a problem stated and a problem solved; as cartilage and bone. A synthetic judgment becomes analytic as soon as its elements are integrated. Thus, that 'all bodies are extended' is now an analytic judgment, the definition of body including extension. That 'all bodies are heavy' is equally analytic, equally a mere writing out of our concept of body and its attributes, equally included in the comprehensive definition of body; though it once was an extension of our experience, an addition to the concept. To the physicist, as Trendelenburg remarks, weight is as much a mark of the concept 'body,'

* 'Diese Eintheilung ist in Ansehung der Kritik des menschlichen Verstandes unentbehrlich.'—*Prolegomena*, § 3, p. 181. 'No subject,' says HAMILTON, 'in modern speculation has an exerted an intenser interest.'—REID's *Works*, p. 787.

† Compare UEBERWEG: *Logik*, § 83. HEGEL: *Encyclopädie*, § 239. TRENDLENBURG: *Logische Untersuchungen*, ii. 237 seq. and DELBEUF: *Logique Scientifique*, p. 103.

as extension is to the mathematician.* Both extension and weight are predicates; the act of predication is the same mental process in one case as in the other. There may be some difficulty in recognising the synthetical nature of the predication where the elements have been so integrated that the proposition has become an identical one; but, let us take another example: 'Fire burns.' Is this analytic or synthetic? To us, with a large experience of fire, the proposition 'fire burns' is analytic—simply a verbal proposition: what we mean by 'fire' is a subject which among other attributes has this of burning; the burning is an integral part of our concept. But to a child, whose experience of fire is less, whose concept includes brightness and form, but not burning, the addition 'it burns' would be as much a synthesis, as the addition of weight to the concept of bodies is a synthesis.

Kant has himself given a similar example. 'Gold is a yellow metal,' is analytic, he says, because 'to know this, I have no need of an enlargement of my experience; my concept of gold containing the elements of its yellowness and metallic nature, I have only to analyse this concept, and need not seek further.'† In other words, an analytic judgment is the explication of a definition: it is what old logicians called an *essential*, and Locke a *verbal*, proposition. In the analysis of a whole into its parts, certain parts which had been concealed are brought to light. But this whole is itself a synthesis, and was originally put together. The metallic element was discovered in gold, and, once discovered, once put there, was for ever after kept there. The slow integration of experiences converts what was originally synthetic and inductive, into what is now analytic and deductive. The progress of science consists in the gradual integration of such experiences and the transformation of synthetic into analytic judgments, so that propositions which at first were

* TRENDLENBURG: *Logische Untersuchungen*, ii. 240.

† *Prolegomena*, § 2, p. 178.

hypothetical become at last truisms.* In the pre-mathematical period the concept of a circle was that of a perfectly round line, or of a space bounded on all sides by a line returning on itself. No one will say that it was a mere writing out of this concept, when mathematicians discovered that every point in this line is equally distant from a point in the centre; yet this was, we see, involved in the nature of a circle, though assuredly not in the concept then formed of a circle. Now such a judgment is analytic. Further, when mathematicians enlarged their concept by the discovery of another property of circles, namely, that the length of their circumferences is to the length of their diameter in the approximate ratio of 3.14159 to 1, this was a synthesis which rapidly became integrated, and we now see that it is involved in the nature of a circle.

A judgment is *ampliative* only so long as it is hypothetical; no sooner is the proposition proved, than there is an end to all increase of knowledge in that direction. To the naturalist the proposition 'All vertebrates are endowed with mind,' is a synthetic judgment, only so long as he is in any doubt as to whether, in the concept vertebrate animal, mind is or is not an integral element of his enlarged experience. But all propositions concerning vertebrates were originally in this state. Decompose the concept, decompose the knowledge out of which that concept emerged, and you will find it a succession of synthetic judgments, which became analytic as each fresh experience was integrated. All judgment is predication, and all predication is synthesis. The predicate is an experience; its subject is also an experience.

Even in the most hypothetical judgment there is always the analytic characteristic, namely, that of its being an elucidation of some element involved in the concept. We never in the most daring flights of hypothesis affirm that vertebrates are vegetables, or that they have planes of cleavage

* APELT says that to confound analytic with synthetic judgments is to confound a Concept with a Cognition. *Metaphysik*, p. 35. But unless concepts are innate, we may ask how was the Concept originally formed except through cognition?

like crystals. Why? Because 'vegetables' and 'crystals' are concepts that cannot be brought under the concept 'vertebrates'—experience and analogy give no indication of any such implication. Whereas 'mind,' or some of the marks by which mind is recognised, can be seen in some of the marks by which a vertebrate is recognised.

Thus judgments are analytic or synthetic at different epochs.* The only tenable distinction is that between verbal and real propositions, and this was drawn by Locke with a precision which leaves little to be desired. Kant, who, as was intimated just now, gave old ideas a novelty by giving them a new terminology, and assigning them a new rank, has not added anything to Locke's chapter 'On Trifling Propositions,' though he regretted its unsystematic exposition.† Here is a passage: 'We can know the truth of two sorts of propositions with perfect certainty; the one is of those trifling propositions which have certainty in them, but it is only a verbal certainty and not instructive. And, secondly, we can know the truth, and so may be certain in propositions which affirm something of another, which is a necessary consequence of its precise complex idea, but not contained in it: As that the external angle of all triangles is larger than either of the opposite internal angles; which relation of the outward angle to either of the opposite internal

* The Spanish metaphysician, NIETO SERRANO, holds a similar opinion. 'En rigor, toda proposicion sintetiza algo, puesto que expresa por medio de la cópula la relacion que hay entre el sugeto y el predicado, y toda proposicion analiza igualmente porque es una fórmula en que aparecen separados y distintos los mismos términos que se relacionan.' *Bosquejo de la Ciencia Viviente*, Madrid, 1867, p. 44.

† LOCKE: *Essay*, B. iv. c. viii. 'There can be no doubt of Kant's originality in discovering for himself this celebrated distinction. Kant was not very deeply read in previous philosophy, but indeed we may well excuse him for not seeing what escaped the terrible erudition of Sir W. Hamilton. Mr. Webb has shown very clearly that Locke in substance completely anticipated it.' MAHAFFY: *note in FISCHER's Commentary on Kant*, p. 28. A glance at the *Prolegomena*, § 3, p. 182, would have shown both these writers that KANT was fully alive to LOCKE's priority. It is perhaps worth remarking that Sir W. HAMILTON (*REID's Works*, p. 187) considers this 'an almost gratuitous concession,' but Sir WILLIAM in writing that note had so imperfect a recollection of KANT's exposition, that he proposes to substitute the terms Explicative and Ampliative, as less ambiguous, forgetting that KANT had himself so denominated them.

angles making no part of the complex idea signified by the name triangle; this is a real truth, and conveys with it instructive real knowledge.'

Let us now pass to the still more important distinction between *à priori* and *à posteriori* judgments which assumed a new form in Kant's hands.* All cognition was held by him to be uninformative unless it were synthetical, and unstable unless it were *à priori*, i. e. independent of Experience and the limitations of Experience. The first task of Criticism was therefore to answer this question: How are synthetical judgments *à priori* possible? Which was only a scholastic way of putting the old question: How can we have knowledge independent of Experience?

That all cognitions must be synthetical and *à priori*, Kant grounds on these propositions: 1. Unless synthetical, they are not real cognitions, they add nothing to our previous store. 2. Unless *à priori*, they cannot be universal and necessary, but only particular and contingent. 3. Unless universal and necessary, they cannot be certainly true.

A cognition is truly such when the hypothetical element is removed and the synthetical judgment has become analytical by integration. So long as any uncertainty existed, it was a problem: it is a theorem now the uncertainty is removed. Thus, that 'bodies are extended' is a cognition; the truth may have become a truism in becoming analytic, but it has not ceased to be a cognition. So much for the first of the three positions.

The second is more important, and equally fallacious. The assumption that if a truth is necessary and universal it must be *à priori*, and cannot have been reached *à posteriori*, is very general, and very false. It has been considered at length in our *Prolegomena*, and I need only recapitulate here the results of that discussion. Every truth is necessary, although every proposition is not necessarily true. Knowledge may be contingent, but truth is not. How we establish the truth

* Diese Frage bildet den eigentlichen Cardinal- und Angelpunkt von Kant's Kritik . . . von der Antwort auf diese Frage hängt das Schicksal der Metaphysik ab.—AFELT: *Metaphysik*, p. 40.

of a proposition is one thing; how we affirm its necessity when established another. As soon as we see it to be true, we see its necessity. The truth that 'fire burns' is as irresistible, necessary, and universal, as the truth, 'the angles of a right-angled triangle are equal to two right angles,' or that $2 + 2 = 4$.

Is there any mark by which we can recognise a necessary proposition beyond that which discloses the identity of its terms? Waiving for the present all perturbations, and assuming that we speak only of true propositions, what, I ask, is there to distinguish one truth as necessary from another as contingent? Every proposition affirms that *a thing is what it is*; the truth lies in affirming this much of it and no more; and the Principle of Contradiction insists on our recognising that the thing *cannot be what it is and other than what it is*. Now, 'universality means that the thing in question, whatever it is, never is otherwise; necessity means that we cannot conceive it otherwise.'* And, as I have abundantly shown, whenever men speak of a contingent truth, they *pre-suppose some variation in the terms of the proposition*, whereby the thing will no longer be what it now is. Strictly considered, the distinction between necessary and contingent should apply only to the abstract and the concrete, or to theory and practice. As Comte says, 'Généralisant par abstraction, la théorie isole chaque phénomène de tous ceux dont il est réellement accompagné, pour le réunir aux effets semblables que comportent tous les autres cas, même hypothétiques. En sens inverse la pratique spécifie toute action d'après l'ensemble des circonstances capables de l'affecter.'†

Kuno Fischer says, 'The character of universality declares that the matter is so in all cases. The character of necessity declares that the contradictory of the assertion is impossible.' What is this but saying that a necessary and universal proposition is one of which the terms are identical? 'But,' he proceeds, 'human experience can only know individual cases. It

* HODGSON: *Time and Space*, 1865, p. 10.

† COMTE: *Synthèse Subjective*, p. 8.

can never comprehend all the cases; nay, now it is perfectly impossible to know that the known cases are all the possible ones. Even with the greatest number of cases which a rich and extended experience can furnish, its judgments can only have comparative not absolute universality. In other words, universality and necessity can *never* be given by experience. That which is given by experience *only* I receive from without; it is in the language of philosophy, a datum *à posteriori*, because it *follows from perception*. That which is *not* given by experience can never follow from experience, and must, if it exist at all, exist independently *before* all experience; it is a datum *à priori*.*

How is this distinction warranted? When I say 'fire burns,' I assert universality and necessity as emphatically as when I say, 'the angles of a right-angled triangle are equal to two right angles;' I am simply asserting an identical proposition. I have not, nor can I ever have, experience of fire in all its possible manifestations; nor have I experience of all possible triangles. But my assertion when made universal does not thereby lose the identity of its terms; the terms remain *unaltered*, and the proposition, in becoming universal, is unchanged. A is A; it is so now; it will be so for ever. In becoming A B, and subsequently disappearing, leaving B only, the identity of the proposition ceases. If a fire exist which is not hot and does not burn, *that* is not the fire of which my proposition speaks. If a right-angled triangle exist, the angles of which are unequal to its two right angles (and one must exist if my proposition is to be impugned), *that* is not the triangle of which I speak. Thus, the terms of the proposition being altered, the conclusion is altered likewise.

There is this source of fallacy respecting propositions of arithmetic or geometry, that their terms being rigorously defined, and the relations being simple, there is no possibility of a change not at once destroying the intuition. I cannot imagine the triangle to be elsewhere composed of other angles

* KUNO FISCHER: *Commentary*, p. 13.

than such as are equal to two right angles, because this is an accurate description of my concept of the triangle. Whereas an object like 'fire' being complex in its terms and relations, some of these may remain while others are changed, and I shall still continue to think of it as 'fire.' But although under conceivable conditions the object 'fire' may so far have been changed as not to burn, this in no way affects the universality and necessity of the proposition 'fire burns,' it only leads to the announcement of *another* proposition, namely, 'under certain conditions fire does not burn;' which, if true, is equally necessary. The contingency is not a matter of judgment, but a matter of fact; and the matter of fact reduces itself to this, that the object 'fire' in the one proposition is not the same as in the other. But if it is allowable to change the terms thus, we may make geometrical propositions equally contingent. In a word, the transformation of a particular to an universal judgment is simply its unconditional generalization; just as we produce a straight line indefinitely so may we enlarge a judgment indefinitely.

Am I then justified in affirming that 'all baboons have blue noses?' No; only in affirming that 'all blue-nosed baboons have blue noses.' The first is an induction which may be false because it *generalizes conditions*; the second is a judgment which must be true because it is an *unconditional generalization*; and here, as I have shown in the *Prolegomena*, lies the true distinction between contingent and necessary truths. The truths of Number and Geometry have a character of peculiar necessity which cannot belong to physical truths, simply because magnitudes are abstracted from all conditions, and their generalization is independent of all possible interference. Kant says, Experience can only teach us that a thing is, and what it is, but never that it is necessarily so, and cannot be otherwise.* This is in-

* *Prolegomena*: Zweiter Theil, § 15, p. 212. 'Nun lehrt mich die Erfahrung zwar was da sei, und wie es sei, niemals aber, dass es nothwendiger Weise so und nicht anders sein müsse.'

accurate. Experience cannot tell us that the conditions which *make* the thing what it now is, will not elsewhere be changed and make it different, because Experience cannot embrace all possible future conditions; but it can and does tell us, that so long as the group of conditions represented by the thing remains what it is, the thing will be what it is.

Kant errs on this point in company with all philosophers who have imagined a distinction to exist, which has no psychological foundation, between general and particular judgments. Sir W. Hamilton affirms that the observation of particular cases of causality could never 'have engendered not only the strong but the *irresistible* conviction that *every* event *must* have its causes. Each of these observations is contingent'—[not at all, each is necessary, each carries with it an irresistible conviction of *its* existence]—'and any number of observed contingencies will never impose upon us the consciousness of necessity, that is, the consciousness of an inability to think the opposite. This theory is thus logically absurd. For it would infer as a conclusion the universal necessity of the causal judgment from a certain number of actual consecutions; that is, it would collect that *all must be* because *some are*.* This is a typical specimen of the logical legerdemain in which metaphysicians delight.

It first assumes that every observation of sequence is contingent; a glaring confusion of ideas: there is nothing whatever contingent in the fact that we observe the sequence; *that* is necessary, and we are incapable of thinking it otherwise, incapable of believing that we have not the feeling. It next assumes, that no number of particulars can impose a general conclusion; but how are general conclusions established except from the particulars? How do we get the idea of uniformity except from the indefinite prolongation of the special cases—a prolongation which is forced upon us in the absence of any contradictory experiences, i.e. any change in the condition which would establish diversity?

* HAMILTON: *Discussions*, p. 588.

The conclusion is not, therefore, *all must be* because *some are*; but *all must be* because *all are*: no sooner does experience correct the natural tendency to confound an indefinite prolongation with an induction, by showing that what is true in some conditions is not true in others, than the terms of the proposition are changed. If—as is undeniable—the particular experience of causation is necessary, and not contingent, inasmuch as we cannot think that the opposite is true now in this particular case; there is equal necessity in generalizing it, and affirming that in *all exactly similar cases* the same will hold. Hamilton's mistake is the one always committed, of silently changing the terms, and converting a prolongation into an induction; hence he says, in continuation, 'logically absurd, it is also psychologically false. For we find no difficulty in conceiving the *converse* of one or all observed consecutions; and yet the causal judgment which, *ex hypothesi*, is only the result of these observations, we cannot possibly think as possibly unreal.' Now, in what sense can we be said to conceive the converse of each observed fact? We cannot conceive that we have not observed it, we cannot conceive that this A is B. But we, aware of our liability to error, conscious that the ultimate nature of things is hidden from us, can conceive that we have falsely observed (and hence the contingency of our judgment), or we can conceive that—under different conditions—the observations might be different; we can conceive that a stone would rise in the air, although we have always observed it to fall. Does this disturb the legitimacy of our generalization? Not in the least. In the first place the converse of the particular judgment is only reached by an alteration of the terms; the stone rises instead of falling, because the air is heavier and pushes it upward like smoke. In the next place, the 'causal judgment' is that 'every event must have a cause.' This is a different judgment. It is an unconditional generalization of the proposition that an event has an antecedent. Whether originally reached by an induction, from which the various conditions have subsequently

been eliminated, is a question which may be debated; but however reached, the necessity of the causal judgment in general is not greater than the particular judgment, 'this event has a cause.'

It is needless to pursue this argument here. Enough has been said to show that the position relied on by Kant (and all other philosophers) respecting the peculiar validity assigned to necessary truths as being *à priori*, and independent of experience, is baseless. Kant is forced to hold that the demonstration of a theorem is only true in the particular instance, and to make it universally true there is need of an *à priori* intuition. But, as an acute writer well remarks, 'If a conclusion from a single instance in empirical intuition can possess only limited validity, how can a conclusion from a single instance in pure intuition possess unlimited validity? In either case the universal is deduced from the particular; what is the difference in the two cases? It does not follow that the theorem is true of all triangles possible to pure intuition simply because it is true of one, unless it equally follows that the theorem is true of all triangles possible to empirical intuition because found true of one triangle.'* Kant would have answered this with his constant assumption of the contingency of empirical and the necessity of pure intuition. It is this assumption against which the student is warned, if he would not be led astray in metaphysical swamps.

In the first edition of the *Kritik* we read: 'It is a very remarkable fact that, even with our experiences, cognitions are mixed up which must have their origin *à priori*, and perhaps only sense to supply a connexion for our representations of Sense. For even if we remove from our experiences all that belongs to sense, there still remain certain primitive concepts and judgments generated from them which must have originated *à priori* quite independent of experience, because we can, or at least we think we can, assert more of the objects of sense than mere experience would teach us.'

* *North American Review*, July 1864, art. on *The Philosophy of Space and Time*.

On this it may be remarked that Kant unwarrantably limits Experience to Sense, and thus obscures the whole subject; although his own definition of Experience, 'a continuous synthesis of perceptions,'* implies the existence of an element over and above Sense, namely, that which *combines*; and he thereby implies, in *à posteriori* and empirical cognitions, the operation of that very factor which he declares to be peculiar to *à priori* cognitions. What he means is probably, that even in ordinary empirical knowledge there is the necessary co-operation of certain Laws of Thought, the original data of the mind, which, because they are original data, cannot be affiliated on Experience, and must therefore be *à priori*. But this only cuts the ground from under him. It proves that in *every* act of judgment the mind is moved by its own Laws, and that these belong to it, and not to the objects of knowledge. In every act? Then in *à posteriori* no less than in *à priori* judgments; consequently the famous distinction between these acts is shown to be arbitrary, and to carry none of the important consequences he deduces respecting the validity of *à priori* knowledge. It proves that *all* knowledge must have an *à priori* element—namely, the capacity of the knowing mind; and an *à posteriori* element—namely, the object given in experience. Knowledge is a function of the two; but the coefficients are not separable in any one particular act. The capacity has no value until it is realized; the law has no existence until it is in act, and in act it is identified with the object.†

* *Prolegomena*, § 5, 188. Erfahrung ist selbst nichts Anderes als eine kontinuierliche Zusammenfügung (Synthesis) der Wahrnehmungen. In a note to § 22, p. 223, he seems to have been aware of the contradiction, and tries to evade it, not, I think, successfully.

† I shall presently recur to the impossibility of separating the two coefficients; meanwhile here is a passage from the *North American Review* advocating a view similar to that in the text. 'The laws of Knowledge are *à priori* and absolutely independent of Experience; but knowledge itself, being from its nature the knowledge of objects and of their relations, is not possible until the presentation of objects, and is consequently so far dependent on experience. Laws are only known in phenomena; phenomena are only known according to laws; hence every act of knowledge involves both an object of the act and laws which regulate the act.'

Recurring for a moment to the passage last quoted from Kant, let attention be drawn to the 'cognitions' which are said to be mingled with our experiences; inasmuch as he repudiated Innate Ideas, and inasmuch as his Forms of Thought are only determining conditions of Knowledge, not the Knowledge itself, this confusion of the *conditions* with the *result*—of Forms of Cognition with Cognitions—should have been sedulously guarded against. In his system, however, the confusion is an integral part; many of his deductions would be impossible if the conditions alone were assumed, and not the cognitions which result.

I have interrupted the exposition in order to discuss these topics because of their fundamental importance. If I am correct in concluding that the distinction between *à priori* and *à posteriori* judgments, like that between analytic and synthetic judgments, is a logical distinction without psychological validity, one of the pillars of the Critical Philosophy* is undermined. Kuno Fischer has traced the history of Kant's opinions, and regards his discovery of the *à priori* nature of synthetical judgments as the decisive step to which all previous advances tended; 'by this step he separated himself from Hume, and overthrew scepticism.'

The famous question: How are synthetic judgments *à priori* possible? was a scholastic form of the old question: How can we have any knowledge independent of Experience? Kant answers it, not by assuming the existence of Innate Ideas, but as Leibnitz did, by assuming the existence of certain Forms of Thought—certain native conditions which render Experience possible, and which must be *à priori*. He gave a profound impulse to Philosophy by his mode of elucidating these Forms; but the very impetus of the movement carried men away from the real path of research, namely, an objective investigation of the psychological mechanism as dependent on organic conditions.

His object was to give a theory of all the pure elements, *à priori*, which enter into knowledge as distinguished from

* Compare APELT: *Metaphysik*, pp. 41–50.

the *à posteriori* elements. He advances four fundamental propositions:

1. That Experience does not furnish the whole of our knowledge;
2. That what it does furnish has the character of contingency and variability;
3. That the mind also furnishes an element, which element is an inseparable condition of all knowledge; without it knowledge could not be;
4. That this element has the character of universality and necessity;
5. And that the principle of all certitude is precisely this universality and necessity.

He set himself to examine the nature of the mind, and to trace the distinctive characters of each element of knowledge, i.e. the objective and the subjective. Instead of saying, with the Sensational School, All our knowledge is derived from the senses, Kant said, *Half* of all our knowledge is derived from the senses: and the half which has another origin is *indissolubly bound up with the former half*. Thus, instead of saying with the Cartesians, that, besides the ideas acquired through the sense, we have also certain ideas which are innate, and irrespective of sense; Kant said *all* our ideas have a double origin, and this twofold co-operation of object and subject is *indispensable* to all knowledge.

The *Critique of the Pure Reason* is an examination of the mind, with a view to detect its *à priori* principles. He calls these *pure* because they are *à priori*, because they are above and beyond experience. Having demonstrated that the mind has *some* pure principles—has some ideas which were never given in experience, and must therefore be *à priori*—he was led to inquire how many the mind possessed. He does not trouble himself with investigating the nature of perception (had he done so he might have seen the error of his analysis); he contents himself with the fact that we have sensations, and with the fact that we have ideas whose origin is not sensuous.

The Non-ego and the Ego, the objective world and the subjective mind, being placed face to face, the two co-operate to produce knowledge. We are however here only concerned with the subject. What do we discover in it? First, a Sensibility—a power of being affected by objects; this is what Kant calls the *Receptivity* of the mind: it is entirely passive. By it the representations of objects (*Vorstellungen*) are received. Secondly, an Understanding (*Verstand*)—a faculty of knowing objects by means of the representations furnished by our Sensibility; this is an *active* faculty; in antithesis to Sensibility, it is a *Spontaneity*.

But our Sensibility, although passive, has its laws or conditions; and, to discover these conditions, we must separate that which is diverse and multiple in our sensations from that which remains invariably the same. The objects are numerous and various; the subject remains invariable. Kant calls the multiple and diverse element by the name of *material*; the invariable element by the name of *form*. If therefore we would discover the primary conditions of our Sensibility, we must discover the invariable elements in all sensations.

There are two invariable elements—*Space* and *Time*. They are the forms of our Sensibility. Space is the form of our Sensibility, as external; Time the form both as internal and external.

Analyze sensations of external things as you will, you can never divest them of the form of Space. You cannot conceive bodies without Space; but you can conceive Space without bodies. If all matter were annihilated, you must still conceive Space to exist. Space therefore is the indispensable condition of sensation: the form of external Sensibility. It is not given in the materials of sensation; since you may conceive the objects annihilated, but cannot conceive the annihilation of Space. Not being given in the material, it must therefore constitute the form.

Similar reasoning proves that Time is also the form of our Sensibility, considered both as internal and as external. We cannot conceive things as existing, except as existing in Time;

but we can conceive Time as existing, though all things were annihilated. Things subjected to our Sensibility are subjected to it in *succession*; that is the form of our Sensibility.

Such then are the two indispensable conditions of all sensation—the two forms with which *we* invest all the varied materials presented to us. It is evident that these two ideas of Space and Time cannot have been given in the materials, consequently are not deducible from experience; *ergo*, they are *à priori*, or, as Kant calls them, *pure intuitions*.

The forms of Sensibility being those of Space and Time, we must pass onwards to the higher operations of the mind. The function of the Understanding is to judge. It is eminently an active faculty; and by it the percepts furnished through our sensibility are elevated into concepts (*Begriffe*). If we had only Sensibility, we should have sensations, but no knowledge. It is to the Understanding that we are indebted for knowledge. And how are we indebted to it? Thus: the variety of our sensations is reduced to unity—they are linked together and made to interpret each other by the Understanding. A sensation in itself can be nothing but a sensation; many sensations can be nothing but many sensations, they can never alone constitute concepts. But one sensation linked to another by some connecting faculty—the diversity of many sensations reduced to unity—the resemblances, existing amidst the diversity, detected and united together—is the process of forming a concept, and this is the process of the Understanding, by means of Imagination, Memory, and Consciousness.

Our senses, in contact with the external world, are affected by objects in a certain determinate manner. The result Kant calls a representation (*Vorstellung*) in reference to the object represented; an intuition (*Anschauung*) in reference to the affection itself. These intuitions are moulded by the Understanding into concepts; the sensation is converted into a thought.

The Understanding is related to Sensibility in the same way as Sensibility is related to external things. It imposes certain forms on the materials furnished it by Sensibility, in

the same way as Sensibility imposed the forms of space and time upon objects presented to it. These forms of the Understanding are the laws of its operation.

To discover these forms we must ask ourselves, What is the function of the Understanding?—Judgment. How many classes of judgments are there? In other words, What are the invariable conditions of every possible judgment?—They are four: Quantity, Quality, Relation, Modality. Under one of these heads every judgment may be classed.

A subdivision of each of these classes follows:—1. In judging of anything under the form of *Quantity*, we judge of it as unity or as plurality; or, uniting these two, we judge of it as totality. 2. So of *Quality*: it may be reality, negation, or limitation. 3. *Relation* may be that of substance and accident, cause and effect, or action and reaction. 4. *Modality* may be that of possibility, existence, or necessity.

In those Categories* Kant finds the *pure forms* of the Understanding. They render Thought possible; they are the invariable conditions of all conception; they are the investitures bestowed by the Understanding on the materials furnished by Sense.

By the Categories, he declares he has answered the second half of the question, How are synthetic judgments, *à priori*, possible? The synthetic judgments of the Categories are all *à priori*.

But we have not yet exhausted the faculties of the mind. Sensibility has given us intuitions, Understanding has given us concepts, but there is still another faculty—the crowning faculty of Reason (*Vernunft*), the pure Forms of which we have to seek.

Understanding is defined, the faculty of judging (*Vermögen der Urtheile*); Reason is the faculty of ratiocination—of drawing conclusions from given premises (*Vermögen der*

* On KANT's use of the term categories, see HAMILTON: *Logic*, i. 197–8. On the subject generally, comp. KANT: *Prolegomena*, iii. p. 210; *Anfangsgründe der Naturwissenschaft*, preface, pp. xvi. xviii.; and APELT: *Metaphysik*, p. 132. Then read the exposition in the *Kritik*.

Schlüsse). Reason reduces the variety of conceptions to their utmost unity. It proceeds from generality to generality till it reaches the *unconditional*. Every concept must be reduced to some general idea, that idea again reduced to some still more general idea, and so on till we arrive at an ultimate and unconditional principle, such as God.

Reason not only reduces particulars to a general, it also deduces the particular from the general: thus, when I say, 'Peter is mortal,' I deduce this particular proposition from the general proposition, 'All men are mortal;' and this deduction is evidently independent of experience, since Peter being now alive, I can have no experience to the contrary. These two processes of reducing a particular to some general, and of deducing some particular from a general, constitute ratiocination.

Reason has three pure forms; or, as Kant calls them, borrowing the term from Plato, *Ideas*.* These are wholly independent of experience; they are above Sensibility—above the Understanding; their domain is Reason, their function that of giving unity and coherence to our conceptions.

The Understanding can frame certain general concepts, such as man, animal, tree; but these general concepts themselves are subordinate to a still more general Idea, embracing all these general concepts in the same way as the concept of man embraces several particulars of bone, blood, muscle, etc. This Idea is that of the Universe.

In the same way all the modifications of the thinking being—all the sensations, thoughts, and passions—require to be embraced in some general Idea, as the ultimate ground and possibility for these modifications, as the noumenon of these phenomena. This Idea is that of an *ego*—of a personality—of a Soul.

Having thus reduced all the varieties of the *ego* to an unconditional unity, viz. Soul, and having also reduced all the varieties of the *non-ego* to an unconditional unity, viz. the Universe, his task would seem completed; yet, on

* Compare TRENDLENBURG: *Logische Untersuchungen*, ii. 473.

looking deeper, he finds that these two Ideas presuppose a third—a unity still higher, the source of both the world and of the *ego*—viz. God.

God, the Soul, and the Universe are therefore the three Ideas of Reason, the laws of its operation, the *pure forms* of its existence. They are to Reason what Space and Time are to Sensibility, and what the categories are to Understanding.

But these Ideas are simply *regulative*: they operate on concepts as the Understanding operates upon sensations; they are discursive, not intuitive; they are never face to face with their objects: hence Reason is powerless when employed on matters beyond the sphere of Understanding. If it attempts to operate beyond its sphere, it can draw nothing but false, deceptive conclusions—if it attempts to solve the question raised respecting God and the Universe, it falls into endless contradictions.

Respecting the illusory nature of Reason, which is often confounded with its delusory nature, I cannot do better than quote Mr. Bolton's correction* of Sir W. Hamilton, who here, as elsewhere, displays a singular misconception of Kant:

'Kant teaches that there is a natural temptation to employ the ideas of Reason illegitimately, owing to a certain natural illusion, termed by him *transcendental illusion*, which disposes us to believe that these ideas, whose right use is purely immanent, can enable us to extend our cognitions beyond the limits of experience. Critical examination shows us that this appearance is illusory, and prevents us from being deceived by it; yet though *delusion* is thus prevented, *illusion* still remains. As examples of illusion thus existing without delusion, Kant instances the appearance of the sea, which seems to be higher at the horizon than near the shore, though we know this is not the case; and again the appearance of the moon, which seems larger near the horizon than near

* BOLTON: *Inquisitio Philosophica: an Examination of the Principles of Kant and Hamilton*, 1866, pp. 109 *sq.* Compare also Mr. MAHAFFY's Introduction to KUNO FISCHER, p. lxiv.

the zenith, though we know both by measurement and by calculation that the appearance in question is illusory.

‘These views are expressed by Kant in a great number of passages, of which the following may be quoted:

‘The result of all the dialectical attempts of pure Reason not only confirms the truth of what we have already proved in our transcendental analytic, namely, that all inferences which would lead us beyond the limits of experience are fallacious and groundless, but it at the same time teaches us this important lesson, that human reason has a natural inclination to overstep these limits. . . .

‘Whatever is grounded in the nature of our powers will be found to be in harmony with the final purpose and proper employment of those powers, when once we have discovered their true direction and aim. We are entitled, therefore, to suppose that there exists a mode of employing transcendental ideas which is proper and *immanent*; although, when we mistake their meaning, and regard them as conceptions of actual things, their mode of application is *transcendent* and delusive. . . . Thus all errors of misapplication are to be ascribed to defects of judgment, and *not to understanding or Reason*.

‘I accordingly maintain that transcendental ideas can never be employed as constitutive ideas, that they cannot be conceptions of objects, and that, when thus considered, they assume a fallacious and dialectical character. But, on the other hand, they are capable of an admirable and indispensably necessary application to objects as regulative ideas, directing the understanding to a certain aim, the guiding lines towards which all its lines follow, and in which they all meet in one point. This point, though a mere idea (*focus imaginarius*) . . . serves notwithstanding to give to these conceptions the greatest possible unity combined with the greatest possible extension. Hence arises the natural illusion which induces us to believe that these lines proceed from an object which lies out of the sphere of empirical cognition, just as objects reflected in a mirror appear to be

behind it. But this illusion, *which we may hinder from imposing upon us*, is necessary and unavoidable if we desire to see, not only those objects which lie before us, but those which are at a great distance behind us. . . . If we review our cognitions in their entire extent, we shall find that the peculiar business of Reason is to arrange them into a *system*, that is to say, to give them connection according to a principle.

‘Having thus shown the difference between the illegitimate and the legitimate use of Reason—the former “transcendent,” seeking to transcend the limits of experience; the latter “regulative,” or “immanent,” not overstepping those limits, but seeking to systematise our empirical cognitions—Kant devotes the concluding portion of his work, the *Methodenlehre*, or doctrine of Method, to an examination of the principles which guide Reason in its *legitimate* use.

‘Such is the real nature of Kant’s doctrine; and it is important to set it clearly forth, inasmuch as Sir W. Hamilton has wholly misrepresented it. He represents Kant as teaching that Reason, when *legitimately* exercised, is essentially *delusive*; whence, as he observes, the most pervading scepticism inevitably results; and he represents himself as correcting this erroneous doctrine, by discovering and showing that the antinomies expounded by Kant result only from an *illegitimate* use of Reason.’

The following are passages from Hamilton’s writings setting forth this view. Speaking of Kant, Hamilton says:

‘He endeavoured to evince that pure Reason, that Intelligence, is naturally, is necessarily repugnant with itself, and that speculation ends in a series of insoluble antilogies. In its highest potency, in its very essence, thought is thus infected with contradiction, and the worst and most pervading scepticism is the melancholy result. If I have done anything meritorious in philosophy, it is in the attempt to explain the phenomena of these contradictions; in showing that they arise only when intelligence transcends the limits to which its legitimate exercise is restricted; and that

within those bounds (the conditioned) natural thought is neither fallible nor mendacious—

‘Neque decipitur, nec decipit umquam.’

If this view be correct, Kant’s antinomies, with their consequent scepticism, are solved; and the human mind, however weak, is shown not to be the work of a treacherous Creator.*

In another passage concerning Kant, after stating his doctrine relative to Phenomena and Noumena, Hamilton says:

‘In accordance with this doctrine, he explicitly declares Reason (or Intelligence) to be essentially and of its own nature delusive; and thus more overtly than the others he supersedes (what constitutes the fundamental principle and affords the differential peculiarity of the doctrine of the conditioned) the distinction between Intelligence *within* its legitimate sphere of operation, impeccable, and Intelligence *beyond* that sphere, affording (by abuse) the occasions of error.’†

Mr. Bolton, after pointing out Hamilton’s misrepresentations, adds:

‘Thus the explanation of the antinomies put forward by Hamilton as a discovery of his own, his most meritorious philosophical achievement, is no other than the explanation which Kant himself gives, not once merely, but in a great number of passages.

‘It appears, therefore, that Hamilton first imputes to Kant a doctrine which Kant strongly condemns; next puts forward the doctrine which Kant clearly and repeatedly asserts, and represents this as a discovery of his own, a valuable improvement on Kant’s teaching. And he tells us that if he has done anything meritorious in philosophy, it is in making this discovery!’

Returning now to the exposition of Kant’s doctrine, we are landed in the conclusion that knowledge is, in its very

* *Lectures*, vol. i. p. 402.

† *Discussions*, p. 633.

constitution, purely subjective, *ergo* relative. To attempt to transcend the sphere of the subjective is vain and hopeless; nor is it wise to deplore that we are ‘cabin’d,’ ‘cribb’d,’ confined’ within that sphere from which we never can escape. As well might the bird, when feeling the resistance of the air, wish that it were *in vacuo*, thinking that there it might fly with perfect ease. Let us therefore content ourselves with our own kingdom, instead of crossing perilous seas in search of kingdoms inaccessible to man. Let us learn our weakness.*

FIRST RESULT.—A knowledge of things *per se* (*Dinge an sich*) is impossible, so long as knowledge remains composed as at present; consequently Ontology, as a science, is impossible.

But, it may be asked, if we never knew noumena (*Dinge an sich*), how do we know that they exist? The answer is simple: Their existence is a necessary postulate. Although we can only know the appearances of things, we are forced to conclude that the things exist. Thus, in the case of a rainbow, we discover that it is only the appearance of certain drops of water: these drops of water again, although owing their shape, colour, etc., to our Sensibility, nevertheless exist. They do not exist *as* drops of water, because drops of water are but phenomena; but there is an unknown something which, when affecting our Sensibility, appears to us as drops of water. Of this unknown something we can affirm nothing, except that it necessarily exists because it affects us. We are conscious of being affected. We are conscious also that that which affects us must be something different from ourselves. This the law of causation reveals to us.

A phenomenon, inasmuch as it is an appearance, presupposes a noumenon—a thing *which appears*,—but this noumenon, which is a necessary postulate, is only a negation to us. It can never be positively known; it can only be known under the conditions of sense and understanding, *ergo* as a phenomenon.

* Compare the fine passage at the close of the Introduction to the *Kritik*.

SECOND RESULT.—The existence of an external world is a necessary postulate, but its existence is only logically affirmed.

From the foregoing it appears that we are unable to know anything respecting things *per se*; consequently we can never predicate of our knowledge that it has objective truth.

But our knowledge being purely subjective and relative, can we have no certainty?—are we to embrace scepticism? No.

THIRD RESULT.—Our knowledge, though relative, is *certain*. We have ideas* independent of experience; and these ideas have the character of universality and necessity. Although we are not entitled to conclude that our subjective knowledge is completely true as an expression of the objective fact, yet we are forced to conclude that within its own sphere it is true.

FOURTH RESULT.—The veracity of consciousness is established.

FIFTH RESULT.—With the veracity of consciousness, is established the certainty of morals.

It is here we see the importance of Kant's analysis of the mind. Those who reproach him with having ended, like Hume, in scepticism, can only have attended to his *Critique of the Pure Reason*, which certainly does, as we said before, furnish a scientific basis for scepticism. It proves that our knowledge is relative; that we cannot assume things external to us to be as we conceive them: in a word, that Ontology is impossible.

So far Kant goes with Hume. This is the goal they both attain. This is the limit they agree to set to the powers of the mind. But the different views they took of the nature of mind led to the difference we before noted respecting the certainty of knowledge. Kant having shown that consciousness, as far as it extended, was veracious; and having shown that in consciousness certain elements were given

* Here we see the effect of confusing cognitions with conditions of cognition (noted p. 461). It is not ideas that are independent of experience, but the organic conditions on which ideas depend.

which were not derived from experience, but which were necessarily *true*; it followed that whatever was found in consciousness independent of experience, was to be trusted without dispute.

If in consciousness I find the ideas of God, and Virtue, I cannot escape believing in God, and Virtue. This belief of mine is, I admit, practical, not theoretical; it is founded on a *certainty*, not on a *demonstration*; it is an ultimate fact, from which I cannot escape—it is not a conclusion deduced by reason.

The attempt to demonstrate the existence of God is an impossible attempt. Reason is utterly incompetent to the task. The attempt to penetrate the essence of things—to know things *per se*—to know noumena—is also an impossible attempt. And yet that God exists, that the World exists, are irresistible convictions.

There is another certitude, therefore, besides that derived from demonstration, and this is moral certitude, which is grounded upon belief. I cannot say, 'it is morally certain that God exists,' but I must say, 'I am morally certain that God exists.'

Here then is the basis for a *Critique of the Practical Reason*, an investigation into the Reason, no longer as purely theoretical, but as practical. Man is a being who acts as well as knows. This activity must have some principle, and that principle is *freedom of will*.

As in the theoretical part of Kant's system we saw the Supersensual and Unconditioned presupposed as existent (under the name of things *per se*), but not susceptible of being known or specified; so in this practical part of the system we find the principle of Freedom altogether abstract and indeterminate. It realizes itself in acts.

In the very constitution of his conscience, man discovers the existence of certain rules which he is imperatively forced to impose upon his actions; in the same way as he is forced by the constitution of his reason to impose certain laws upon the materials furnished him from without. These moral laws

have likewise the character of universality and necessity. The idea of virtue never could be acquired in experience, since all we know of virtuous actions falls short of this ideal which we are compelled to uphold as a type. The unalterable idea of justice is likewise found, *à priori*, in the conscience of men. This indeed has been denied by some philosophers; but all *à priori* truths have been denied by them. They cite the cruel customs of some savage races as proofs that the idea of justice is not universal.* Thus, some tribes are known to kill their old men when grown too feeble; and they test their strength by making these old men hold on to the branch of a tree, which is violently shaken, and those that fall are pronounced too weak to live. But even here, in spite of the atrocity, we see the fundamental ideas of justice. Why should they not abandon these aged men to all the horrors of famine and disease? and why put them to a test? Look where you will, the varied customs of the various nations peopling the earth will show you different notions of what is just and what is unjust; but the *à priori* idea of justice—the moral law from which no conscience can be free—that you will find omnipresent.

§ III. CRITICISM OF THE KRITIK.

Brief, and I fear painfully dry, as the foregoing exposition has been, the student may accept it as a general indication, sufficient for the purposes of this History, of the line of thought adopted by Kant. To complete it, we must consider the cardinal positions involved. This has already been done with respect to analytic and synthetic judgments, and the all-important assumption of necessity being unattainable except *à priori*. What now remains is to consider the general principle of Forms of Thought, and its special examples, Space and Time—the distinction between Objective and Subjective elements in thought—and the solution of the Idealistic and Sceptical questions.

* Kant alludes to Locke.

Space and Time. Although the spontaneity of Mind was never *wholly* denied, even by those of the Sensational School who regarded Mind as a product of the Senses, nevertheless, opinions on this important point were singularly vague. Locke, as we have seen, presupposed certain native Faculties. Condillac presupposed certain native Capacities. Cabanis and Tracy presupposed certain Laws of Sensibility. All the schools presupposed certain laws of mental combination. These constituted the subjective conditions of Experience; whatever spontaneity could be attributed to the Mind was assigned to them. But no one accurately defined them. It was Kant's immense merit to have seen clearly the need of accurately determining what these subjective conditions were. He was the first who attempted a clear exposition of the subjective and objective elements in Thought. The attempt produced an epoch. Unhappily, having approached a psychological problem from the wrong side, and employing the Metaphysical Method of subjective analysis where the Biological Method of objective analysis was equally indispensable, he not only failed to discover what were the conditions of Sensibility and the Laws of Thought, but by the very potency of his genius retarded progress in that direction.

His initial mistake, almost inevitable on the Method he pursued, is that of transporting into Psychology the old Aristotelian error of Matter and Form as separable elements in reality because they are separable in abstraction. Hence the Forms of Thought became for him ready-made factors, anterior to and independent of Experience. Had he profoundly considered the Aristotelian distinction, he must have had his eyes opened to the conclusion that the Forms of Thought should be sought either physiologically, i.e. in the organic conditions, or psychologically, i.e. in the evolution of Thought. The fact that we think at all is assuredly determined by our being so organised that thought is the activity of the organs; this organization is therefore *à priori*, i.e. anterior to any experience for it. Now physiological, and psychological, analysis disclose that we are forced to think

as *successive* what in nature is *simultaneous*; that deep down in the very constitution of consciousness lies the indispensable condition of *change*; that inwoven with all psychical experience there is the unalterable presence of the action of *judgment*—the union of a predicate with a subject; these, and several other conditions of Thought, which would take too long to expound here, must have disclosed themselves to him; but how would they have presented themselves? as *ready-made* Forms (*fertige Formen*), or as Forms *in the making*? as pre-existent elements, or as evolved results? The Aristotelians, and with them Kant, confounding the potential with the actual, the conditions with the results, would answer this question plainly in favour of the first alternative. Because the form of the oak is evolved from the acorn, they would declare the form to pre-exist in the acorn.* We, knowing that under suitable conditions the acorn will develop into the oak, and, if it develop at all, will assume the Form of an oak, and no other, are allowed to say without danger that the stem, branches, and foliage are organic Forms potentially existing in the acorn. But a scientific Botany is not content with this. Nor will it permit us to say that stem, branches, and foliage are ready made in the acorn, prior to all those influences of heat, moisture, air, and manure, which will render possible their evolution. In like manner a scientific Psychology refuses to accept the evolved results of Experience as *à priori* conditions of Experience; refuses to accept the Forms *into* which Thought necessarily develops as the pre-existing and perfected Forms *through* which it is determined.

That Kant did regard the Forms as wholly independent of organic conditions, is certain. He was not satisfied with assuming the existence of original aptitudes out of which the Forms might grow. 'It is quite possible,' he says, 'that some one may propose a sort of preformation system of Pure Reason, in which the Categories are neither self-conceived, *à priori* first principles of cognition, nor derived from ex-

* On this fallacy see what is said in the *Prolegomena* to this History, § 51.

perience, but are merely aptitudes for thought implanted in us contemporaneously with our existence.' He rejects this suggestion on the ground that 'the Categories would thereby lose their character of objective necessity. Nor would there be wanting persons to deny the subjective necessity of the Categories, though they must feel it. Certainly we could never dispute with any one about that which merely depended on the manner in which he was organized.'

Why not? Can we have any better security? And does not Kant himself reduce all certainty to this subjective ground, denying that we can have objective certainty?

By thus refusing to consider the Forms of Thought as results of the organism, he shut himself out from the possibility of discovering them. A little attention to biological data would have shown him that his enumeration of the Forms was incomplete, and that his conception of them as ready-made was false. The Forms he enumerates are too few to express the subjective conditions. He omits Pleasure and Pain, for example, which are inseparable elements of all Sensation, determining all Action. He says nothing of the various Senses, and their conditions; although obviously the cause why vibrations of a given rapidity only produce the sensation of light, and other vibrations only the sensation of heat, lies in the *à priori* organization of the retina and the skin nerves. He would not deny that Light, Heat, and Sound were Forms of Sensibility in which men clothe the *Ding an sich*; just as Space and Time are Forms in which we clothe the *Ding an sich*. Nay, seeing that he used all his ingenuity to show that the Categories of the Understanding played the same part as the Senses in respect of the objective world, it is surprising that he did not also see that *every* subjective condition was entitled to the rank of a Form of Thought, an *à priori* element. Every organ necessarily brings with it its special Forms, i. e. the special modes under which its activity can go on, modes which determine the reception of stimuli, and thus determine the sensation. Sounds and Images are not less *à priori* than concepts. If we can only think under certain

Categories, so likewise we can only feel under certain organic conditions.

Waiving, however, the incompleteness of his enumeration, and accepting Space and Time, the Categories, and the Ideas of Reason as the *summa genera*, I will consider only the validity of his argumentation. Here, *in extenso*, are the four positions on which he grounds the *à priori* and purely subjective nature of Space.

'1. Space is not a conception which has been derived from outward experiences. For in order that certain sensations may relate to something without me (that is, something which occupies a different part of space from that in which I am); in like manner, in order that I may represent them not merely as without of and near each other, but also in separate places, the representation of space must already exist as a foundation. Consequently, the representation of space cannot be borrowed from the relations of external phenomena through experience; but on the contrary, this external experience is itself only possible through the said antecedent experience.

'2. Space, then, is a necessary representation, *à priori*, which serves for the foundation of all external intuitions. We never can imagine or make a representation to ourselves of the non-existence of space, though we may easily enough think that no objects are found in it. It must therefore be considered as the condition of the possibility of the phenomena, and by no means as a determination dependent on them; and is a representation, *à priori*, which necessarily supplies the basis for external phenomena.

'3. Space is no discursive, or, as we say, general conception of the relations of things, but a pure intuition. For in the first place we can only represent to ourselves one space; and when we talk of divers spaces, we mean only parts of one and the same space. Moreover these parts cannot antecede this one all-embracing space, as the component parts from which the aggregate can be made up, but can be cogitated only as existing in it. Space is essentially one, and multi-

plicity in it depends solely upon limitations. Hence it follows that an *à priori* intuition (which is not empirical) lies at the root of all our conceptions of Space. Thus moreover the principles of geometry—for example, that in a triangle two sides together are greater than the third,—are never deduced from general conceptions of line and triangle, but from intuition, and this *à priori* with apodeictic certainty.

'4. Space is represented as an infinite given quantity. Now, every conception must indeed be considered as a representation which is contained in an infinite multitude of different possible representations, which therefore comprises these under itself; but no conception, as such, can be so conceived as if it contained within itself an infinite multitude of representations. Nevertheless, Space is so conceived of, for all parts of space are equally capable of being produced to infinity. Consequently, the original representation of Space is an intuition *à priori*, and not a conception.*

It would needlessly prolong this discussion, to expound the generation of our idea of Space as an abstract idea gathered from our experience. Kuno Fischer proclaims this generation to be a perfect illustration of what an explanation should *not* be.† 'It presupposes,' he says, 'that which it is to explain. Space and Time are already perfectly present in the experiences from which they are supposed to be abstracted. There is no impression, no perception, no representation, which is *not* in Space and Time.' Surely it must be said of all abstractions, that they are presupposed in their elements? He will not allow this. According to him, the abstract idea Man is made up of particular ideas, Men; but Space and Time are not made up of spaces and times, they precede these particulars. 'It is impossible to deduce Space and Time from our perceptions, simply because our perceptions are only possible through Space and Time.'

The fallacy of the argument may most briefly and con-

* *Critique of Pure Reason*. MICKLEJOHN'S translation, p. 23.

† KUNO FISCHER: *Kant's Leben und die Grundlagen seiner Lehre*, 1860, p. 128. Compare his *Commentary*, p. 36.

vincingly be exhibited in an illustration. He would admit that Experience is not *à priori*. If it has any meaning at all, it is *à posteriori*. Apply his argument to it. 'Experience cannot be derived from without. It is impossible to deduce sensations and perceptions from Experience, because they all presuppose it; in every particular experience, there is the antecedent groundwork Experience, which determines the possibility of the particular.'

Kant would probably answer, 'No, there is an *à priori* condition, which renders Experience possible; there is not an *à priori* experience.' I say, in like manner, there is an *à priori* condition of the nervous system, which renders Space and Time possible, but there are not *à priori* Forms of Space and Time ready to give shape to the crude material of sense. The fulcrum of the fallacy is the assumption that we can separate the objective from the subjective elements in thought, and assign what is *à priori*.

Kuno Fischer asks if Space and Time are abstractions, from what impression are they abstracted? He here presupposes them to be Objects, whereas they are Relations. Kant, indeed, denies that they are either Objects or Relations; considering them to have a purely subjective existence, as mere Forms of Thought. Is this consistent with psychological analysis? We may admit that Space and Time are subjective conditions in so far as they are the forms in which, owing to the structure of our organs, all our perceptions are *defined*; but we cannot admit that they are only subjective, inasmuch as they must have corresponding objective conditions; we cannot admit that these forms exist as ready-made Moulds, into which the fused metal of experience must be cast, but we affirm that they are forms gradually evolved in and through Experience, as functions of the two co-efficients—organism and medium. The Forms of Thought, like the Forms of Life, are evolutions, not pre-formations.

Trendelenburg says that Kant, in proving the subjectivity of Space and Time, had scarcely any suspicion that they might also be objective.* But the suspicion had visited him,

* TRENDLENBURG: *Logische Untersuchungen*, i. 163.

and was deliberately rejected. To have admitted it, would have destroyed his whole system. Nor is he answered by proving the objectivity of Space and Time from the law of falling bodies, or the periodicity of organic evolution.* These, Kant would say, are phenomena, and, as such, come under subjective conditions; if we know things at all, we must know them under forms of Space and Time. It is true, that those who espouse the other doctrine find an insuperable objection in the fact that we *discover* quantitative space and time—relations in objects—and do not bring these with us. Granting that we bring Space and Time with us, this is qualitatively, not quantitatively; and the discovery of precise quantities proves the objectivity of something quantified. A point Kant has overlooked.

Thus, unless Matter and Motion be also Forms of Thought, the objectivity of Space and Time, as *relations* of Matter and Motion, must be granted; the relations of co-existence, and succession in objects, are the external correspondents of those internal (mental) relations named Space and Time. But only as relations. I make this remark, because Mr. Herbert Spencer, stating the dilemmas to which we are reduced respecting all ultimate ideas, asserts that 'to say Space and Time exist objectively, is to say that they are entities. The assertion that they are nonentities, is self-destructive; nonentities are nonexistences, and to allege that nonexistences exist objectively, is a contradiction in terms. Neither can they be regarded as attributes of some entity. Thus, as they cannot be either nonentities or attributes of entities, we have no choice but to consider them as entities.'† Surely we have the choice of considering them as relations? But Mr.

* 'La loi Newtonienne, qui rend si bien raison des phénomènes astronomiques, implique l'existence hors de l'esprit humain, du temps, de l'espace et des relations géométriques. Comment admettre que les phénomènes astronomiques, si manifestement indépendants des lois ou des formes de l'intelligence humaine, viendraient se co-ordonner d'une manière simple et régulière en un système qui ne signifierait pourtant rien hors de l'esprit.' COURNOT: *Essai sur les Fondements de nos Connaissances*, 1851, i. 806. Comp. p. 314.

† SPENCER: *First Principles*, p. 47.

Spencer declines to escape from the dilemma through Kant's issue—that they are purely subjective conditions. He justly remarks, that the very fact of consciousness, on which Kant relies—namely, that Space and Time cannot be suppressed—testifies to the objective existence; 'for that consciousness of Space and Time, which we cannot rid ourselves of, is the consciousness of them as existing objectively.'*

The denial of any objectivity to Space and Time, apart from the phenomenal world, has greatly agitated the schools. In Kant's system, the denial was imperative.† It was essential to the discrimination of the *à priori* elements. When we ask for proof of this startling assertion, we find that it rests on questionable assumptions. The chief of these is, that if we eliminate from our empirical intuitions of Matter, and its changes, every element that is empirical, namely, everything belonging to sensation [which is what we cannot do], then Space and Time remain over, and these are therefore the pure intuitions *à priori*. The proof of this? It lies in the assumption that Space and Time are anterior to sensation. Note the involutions of assumption here! First, we are to eliminate the elements furnished by sensation; but, to do this, we must already know what elements are not furnished by sensation; we must know the *à priori* elements before we can isolate them. Next, having found Space and Time remaining over after our arbitrary elimination, we assume those to be *à priori*, because they are not furnished in sensation.

Has Kant proved that Space and Time are purely subjective

* MR. SPENCER seems to me less happy in his objection, that 'if space and time are forms of thought, they can never be thought of; since it is impossible for anything to be at once the *form* of thought and the *matter* of thought.' *First Principles*, p. 49. KANT had himself seen what there is of valid in this objection, expressly distinguishing the form as that which cannot be matter: 'For that *in which* all our feelings are arranged and shaped, into definite shapes, cannot itself be a feeling. *Kritik: Die transcend. Ästhetik*, § 1, p. 60. But he would have answered Mr. SPENCER's objection, by saying, that if the mind can think of itself, it can think of its Forms. Moreover, Mr. SPENCER has himself furnished an answer, in what he says of the unconditioned, pp. 94, 95.

† KANT: *Prolegomena*, § 9, p. 197.

conditions, without any corresponding objective conditions? Sir W. Hamilton affirms that Kant has 'placed the truth beyond the possibility of doubt, to all who understand the meaning and conditions of the problem.'* If the foregoing criticism has any value, the answer will be, No; the proofs adduced by Kant are a series of unacceptable assumptions.

And now we may take in hand the second topic selected for criticism, which has indeed been soliciting us at every step, but which could not conveniently have been treated before: I mean, the distinction between the Objective and Subjective elements in Thought. This distinction is considered the great achievement of the Critical Philosophy. The doctrine of the relativity of Knowledge, never wholly absent from speculation since the days of Protagoras, assumed in Kant's hands a precision and influence which gave an immense impetus to speculation. Nevertheless, there was an initial misconception in his attempt to isolate the elements of an indissoluble act. It was one thing to assume that there are necessarily two co-efficients in the function; another thing to assume that these could be isolated and studied apart. It was one thing to say, Here is an organism with its inherited structure, and aptitudes dependent on that structure, which must be considered as necessarily determining the forms in which it will be affected by external agencies, so that all experience will be a compound of subjective and objective conditions; another thing to say, Here is the pure *à priori* element in every experience, the form which the mind impresses on the matter given externally. The first was an almost inevitable conclusion; the second was a fiction. Psychology, if it can show us anything, can show the absolute impossibility of our discriminating the objective from the subjective elements. In the first place, the attempt would only be possible on the ground that we could, at any time

* HAMILTON: *Lectures on Metaphysics*, ii. 113. Hard words for us doubters! but they did not prevent Sir William's flatly contradicting this indubitable doctrine, since, a few minutes afterwards, we find him asserting, that the idea of space is *à posteriori* as well as *à priori*!

and in any way, disengage Thought from its content: separate in Feeling the object as it is out of all relation to Sensibility, or the subject as pure subject. If we could do this in one instance, we should have a basis for the investigation. The chemist who has learned to detect the existence of an acid, by its reactions in one case, can by its reactions determine it in other cases. Having experience of an acid and an alkali, each apart from the other, he can separate them when finding them combined in a salt, or he can combine them when he finds them separate. His analysis and synthesis are possible, because he has elsewhere learned the nature of each element separately. But such analysis or synthesis is impossible with the objective and subjective elements of thought. Neither element is ever given alone. Pure thought and pure matter are unknown quantities, to be reached by no equation. The thought is necessarily and universally subject-object; matter is necessarily, and to us universally, object-subject. Thought is only called into existence under appropriate conditions; and in the objective stimulus, the object and subject are merged, as acid and base are merged in the salt.* When I say that the sensation of light is a compound of objective vibrations and retinal susceptibility, I use language which is intelligible and serviceable for my purpose; but I must not imagine that the external object named vibration, is the *Ding an sich*, the pure object out of all relation to sensibility; nor that the retinal susceptibility is pure subject, involving no vibratory element. Kant himself would assure me that the vibrations were as subjective as the susceptibility. Indeed, seeing that he denied altogether the possibility of a knowledge of pure object, the *Ding an sich*, it was a violent strain of logic to conclude that in thought he could separate this unknowable object from the subject knowing it. This, great as it is, is not the only violation of consistency in his scheme. Already, in our Prolegomena

* 'Der menschliche Geist ist als getrennter Geist nicht der göttliche und lebt von der Erregung, die er empfängt, um das Empfangene selbstthätig in sein Eigenthum zu verwandeln.'—TRENDELEBURG: *Logische Unters.* i. 135.

(§ 57), we had to notice how he fell into the common error of predication respecting the unknowable. Mr. Bolton has charged him with falling into it, in his refutation of idealism:—

'Thus then Kant, in his anti-sceptic character, affirms that Noumena exist. In doing this he applies to Noumena the category or conception of existence. He affirms that they really exist; thus applying to them the category of reality. He affirms that they are *Noumena*, i.e. objects of our *voûs*; thus applying to them the conception of relation, and specially of the relation of *νοούμενον* to *νοûς*. He affirms that they are to be believed by us—that they are objects of our belief; thus applying to them the conception of credibility, and again that of relation. He supposes that there are Noumena existing besides himself—indeed he generally speaks of Noumena in the plural number—thus applying to Noumena the category of plurality. He declares Noumena to be different from Phenomena;—the peculiar merit of his doctrine is held to be that he distinguishes Phenomena from things in themselves, or Noumena; thus he applies to Noumena the category or conception of difference.

'Again, he teaches that Noumena are active or operative; that by the joint action of the external Noumenon and of our faculties the Phenomenon is produced. And this is evidently an important part of his doctrine. For if we considered that Phenomena might take place and be cognised without any operation or agency of Noumena, we should have no ground to affirm the existence of Noumena at all. Here, then, he applies to Noumena the category of activity, of causality.

'Thus then Kant, in his own teaching, does apply to Noumena the conceptions or categories of existence, reality, activity, relation, difference, etc., and propounds to us the judgments formed in virtue of such an application as valid and legitimate, as important truths; while on the other hand he forbids Leibnitz and other philosophers to apply categories or conceptions to Noumena, and proclaims it as

the main purpose of his labours to establish that such a procedure is wholly illegitimate.

'As to any attempt to demonstrate the existence of Noumena, clearly, if the negative part of Kant's doctrine is right, the attempt must be hopeless. For the demonstration must be conducted by thought, which cannot be done without employing the categories; and the conclusion must apply some of the categories to Noumena, and that not problematically but assertorically. If such a procedure be altogether illegitimate, as Kant so repeatedly asserts, the pretended demonstration must be illegitimate.

'Thus then it appears that the negative principle enunciated by Kant, and established, as he asserts, by his critical labours, is too negative for his purposes; that it is in truth *Alleszermalmend*; crushing the doctrines of his predecessors, Descartes, Leibnitz, &c., but crushing with equal completeness his own teaching, so far as this is positive.

'Again, after having shown, as he conceives, the vanity of all theology based on the intellect and speculative Reason, Kant professes to restore what he had apparently destroyed, by means of the moral or practical Reason. Relying upon this, he re-introduces to us the theological doctrine, that the world is governed by a Personal God, a righteous Judge, who awards to men after death the lot which they deserve: appropriate misery to the bad, and appropriate bliss to the good.

'But if the principles employed in the Critique of the speculative Reason are correct, how can judgments obtained by means of the practical Reason possess any absolute truth? Is it urged that they have a character of necessity or universality, and that judgments having this character should be regarded as absolutely true? If the Critique is correct, it has been shown that the character in question may arise simply from the fact that our minds are constituted in a particular way; and that it does not authorise us to believe that other beings think or judge in like manner. If this be the case, the judgments in question, however useful they may

be for the regulation of our conduct, cannot authorise us to affirm the existence of an unseen Noumenon wholly beyond the field of experience, and to affirm that this Noumenon governs the Universe according to our idea of justice.

'Further, it is evident that when Kant, in his moral theology, affirms God to exist,—to be a righteous governor of the Universe, rewarding the good and punishing the bad,—he quite sets at nought the principle laid down in his Critique, that categories and conceptions have no valid application except to phenomena and to objects of experience. For it is uniformly assumed by Kant that God is a noumenon, not a phenomenon, and that he does not lie within the field of possible experience. Were this otherwise, all Kant's critique of rational theology would fall to the ground. If, then, we can legitimately predicate of God existence, goodness, righteousness, power, and the attributes of a moral governor, we can legitimately make application of categories and conceptions to a Noumenon, and that too not merely problematically, but assertorically.*

As we have said more than once, the distinction between *à priori* and *à posteriori*, between subjective and objective elements in thought, was fundamental in Kant's scheme, and was a sheer impossibility in fact. All philosophers were loud in asserting that no knowledge could have any absolute validity unless it were based on ideas transcending our contingent experience. Such a basis was, by Leibnitz and the ontologists, believed to be furnished in Necessary Truths. These were *à priori*, because necessary. Kant came, and seemed at first to be playing into the hands of the ontologists, by proving, 1, that necessary truths did exist; 2, that they were *à priori*; 3, that all our certitude must repose on them. His proofs of these important positions, which predecessors had only assumed, were pronounced overwhelming. But Kant did not draw from these premisses the conclusion drawn by ontologists; his conclusion was

* BOLTON: *Inquisitio Philosophica*, p. 126.

precisely the reverse of theirs. He showed that the subjective, *à priori* nature of these truths was peremptory proof of their objective falsehood. They could not be truths of things, precisely because they were purely subjective conditions of thought. The ontologists had scouted experience as essentially delusive; Kant showed that Reason was essentially illusive. The ontologists declared that knowledge derived through the senses must be subject to all sensory illusions. Kant showed that the Categories and Ideas of Reason played the same part as the Senses in *excluding* the pure object from knowledge.

Hence the demonstration of the relativity of Knowledge, which was the great outcome of the *Kritik*, was a demonstration of the vanity of ontological speculation. It is true that Kant himself compensated the sceptical results of his *Kritik* by a somewhat arbitrary creation of the Practical Reason, which was to build up all that Theoretical Reason had shown to be without solid foundation. But Philosophy refused the compromise, and the successors of Kant were either Sceptics or Idealists.

He resisted the accusation of Idealism* as a gross misrepresentation. The proposition of all the Idealists, he says, from the Eleatics to Berkeley, is this: 'All knowledge derived from the senses and experience is nothing but delusion (*Schein*); only in the ideas of Reason is there truth.' Whereas the ground principle of his Idealism is 'All knowledge of things founded solely on the Reason is nothing but delusion; only in Experience is there truth.'

On a superficial view this passage might be interpreted as an adhesion to the school of Locke and Hume, in which Experience was posited as the ground of knowledge; but the preceding pages have shown us what Kant really meant by Experience, which was only rendered possible by the existence of certain *à priori* concepts.

That Kant himself was not an Idealist is very certain, but that his system almost inevitably led to Idealism when logi-

* See the *Anhang* to his *Prolegomena*, iii. 303 sq.

cally carried out, is evident in the works of his successors, who were unwilling to preserve the sceptical attitude. The *Ding an sich*, the objective Noumenon, could not, he affirmed, be known by us, because it necessarily became a Phenomenon in becoming known. But it nevertheless existed, and its existence was a necessary postulate. We only know *that* it is, not *what* it is.* The Idealist might, however, justifiably retort upon him, that this Noumenon was only a *suppressed category*—a postulate of the Understanding, and, as such, no less subjective than Time and Space, or Cause and Effect. Again, when Kant attempts to discriminate between Phenomenon and Phantasm (*Erscheinung* and *Schein*), in that the Phenomenon has an objective cause, the Idealist might retort, But you have shown that Causality itself is only a subjective category.

I must close here this necessarily imperfect account of the greatest of modern metaphysicians, and, in closing it, I cannot better express my sense of his greatness, and of the service he has been to Philosophy, than by advising the student to undertake a careful and meditative reading and re-reading of the *Kritik*, the *Prolegomena*, and the *Anfangsgründe der Naturwissenschaft*; for although, as I conceive, Kant was mistaken in Method and fallacious in results, this was the fault of Metaphysics not the weakness of the metaphysician; and seeing that metaphysical problems must be mooted, if only in order that we should learn their insolubility, no more powerful argument, no more stimulating dialectics, can be found than in his writings.

* MR. MANSSEL makes the following objection. 'When Kant declares that the objects of our intuition *are not* in themselves as they appear to us, he falls into the opposite extreme to that which he is combating; the Critic becomes a Dogmatist in negation. To warrant this conclusion we must previously have compared things as they are with things as they seem; a comparison which is, *ex hypothesi*, impossible. We can only say that we have no means of determining whether they agree or not.' *Prolegomena Logica*, p. 82. But KANT is justified, if once the position be allowed that we necessarily mingle the conditions of our Sensibility with the external stimulus; to the extent in which the subject is a factor, to that extent must it be a modifier.

TENTH EPOCH.

Philosophy once more asserts a claim to absolute Knowledge.



CHAPTER I.

FICHTE.

§ I. LIFE OF FICHTE.

JOHANN GOTTLIEB FICHTE was born at Rammenau, a village lying between Bischofswerda and Pulsnitz, in Upper Lusatia, on the 19th May 1762.* His childhood, of which many touching anecdotes are related, was signalized by extraordinary intellectual capacity and great moral energy. He was a precocious child, and long before he was old enough to be sent to school he learned many things from his father, who taught him to read, and taught him the pious songs and proverbs which formed his own simple stock. With these was mixed an enchanting element—the stories of his early wanderings in Saxony and Franconia, stories to which young Johann listened with never-tiring eagerness. It was probably the vague longings which these recitals inspired, that made him wander into the fields, quitting his companions to roam away and enjoy the luxury of solitude. This pale and meditative child is at his ease in solitude. He stands for hours, gazing into the far distance, or in mournful yearning at the silent sky over-arching him. The sun goes

* See the biography by Fichte's son—*Fichte's Leben und literarischer Briefwechsel*, 2 vols. 1836.

down and the boy returns home melancholy with the twilight. He does this so constantly that neighbours remark it; comment on it; and, in after-years, when that boy has become a renowned man, they recur to it with sudden pleasure, not forgetting also that they had 'always said there was something remarkable in the boy.'

Fichte's progress was so rapid that he was soon entrusted with the office of reading family prayers; and his father cherished the hope of one day seeing him a clergyman. An event curious in itself, and very important in its influence on his subsequent career, soon occurred, which favoured that hope, and went far to realize it. But before we relate it we must give a touching anecdote, which exhibits Fichte's heroic self-command in a very interesting light.*

The first book which fell into his hands after the Bible and Catechism, was the renowned history of *Siegfried the Horned*, and it seized so powerfully on his imagination, that he lost all pleasure in any other employment, became careless and neglectful, and, for the first time in his life, was punished. Then, in the spirit of the injunction which tells us to cut off our right hand if it cause us to offend, Fichte resolved to sacrifice the beloved book, and, taking it in his hand, walked slowly to a stream flowing past the house, with the intention of throwing it in. Long he lingered on the bank, ere he could muster courage for this first self-conquest of his life; but at length, summoning all his resolution, he flung it into the water. His fortitude gave way as he saw the treasure, too dearly loved, floating away for ever, and he burst into a passionate flood of tears. Just at this moment the father arrived on the spot, and the weeping child told what he had done; but, either from timidity or incapacity to explain his feelings, was silent as to his true motive. Irritated at this treatment of his present, Fichte's father inflicted upon him an unusually severe punishment, and this occurrence

* For both anecdotes we are indebted to a very interesting article on Fichte which appeared in the *Foreign Quarterly Review*, No. 71. We have abridged the passages; otherwise the narrative is unaltered.

formed a fitting prelude to his after-life, in which he was so often misunderstood, and the actions springing from the purest convictions of duty were exactly those for which he had most to suffer. When a sufficient time had elapsed for the offence to be in some measure forgotten, the father brought home another of these seducing books; but Fichte dreaded being again exposed to the temptation, and begged that it might rather be given to some of the other children.

It was about this time that the other event before alluded to occurred. The clergyman of the village, who had taken a fancy to Gottlieb and often assisted in his instruction, happened one day to ask him how much he thought he could remember of the sermon of the preceding day. Fichte made the attempt, and, to the astonishment of the pastor, succeeded in giving a very tolerable account of the course of argument, as well as of the texts quoted in its illustration. The circumstance was mentioned to the Count von Hoffmannsegg, the lord of the village, and one day another nobleman, the Baron von Mittitz, who was on a visit at the castle, happening to express his regret at having been too late for the sermon on the Sunday morning, he was told, half in jest, that it was of little consequence, for that there was a boy in the village who could repeat it all from memory. Little Gottlieb was sent for, and soon arrived in a clean smock-frock and bearing a large nosegay, such as his mother was accustomed to send to the castle occasionally as a token of respect. He answered the first questions put to him with his accustomed quiet simplicity; but when asked to repeat as much as he could recollect of the morning's sermon, his voice and manner became more animated, and, as he proceeded, entirely forgetting the presence of the formidable company, he became so fervid and abundant in his eloquence, that the Count thought it necessary to interrupt him, lest the playful tone of the circle should be destroyed by the serious subjects of the sermon. The young preacher had however made some impression on his auditory; the Baron made inquiries concerning him, and the clergyman, wishing for nothing more

than an opportunity to serve his favourite, gave such an account that the Baron determined to undertake the charge of his education. He departed, carrying his *protégé* with him, to his castle of Siebeneichen, in Saxony, near Meissen, on the Elbe; and the heart of the poor village boy sank, as he beheld the gloomy grandeur of the baronial hall, and the dark oak forests by which it was surrounded. His first sorrow, his severest trial, had come in the shape of what a misjudging world might regard as a singular piece of good fortune, and so deep a dejection fell on him, as seriously to endanger his health. His patron here manifested the really kindly spirit by which he had been actuated; he entered into the feelings of the child, and removed him from the lordly mansion to the abode of a country clergyman in the neighbourhood, who was passionately fond of children, and had none of his own. Under the truly paternal care of this excellent man, Fichte passed some of the happiest years of his life, and to its latest day looked back to them with tenderness and gratitude. The affectionate care of this amiable couple, who shared with him every little domestic pleasure, and treated him in every respect as if he had been indeed their son, was always remembered by him with the liveliest sensibility, and certainly exercised a most favourable influence on his character.

In this family, Fichte received his first instruction in the languages of antiquity, in which however he was left much to his own efforts, seldom receiving what might be called a regular lesson. This plan, though it undoubtedly invigorated and sharpened his faculties, left him imperfectly acquainted with grammar, and retarded, in some measure, his subsequent progress at Schulpforta. His kind preceptor soon perceived the inefficiency of his own attainments for advancing the progress of so promising a pupil, and urged his patron to obtain for Fichte what appeared to him the advantages of a high school. He was accordingly sent, first to Meissen, and afterwards to the seminary at Schulpforta.

There the system of fagging existed in full force, and with

its usual consequences, tyranny on the one side, dissimulation and cunning on the other. Even Fichte, whose native strength of character in some measure guarded him from evil influences that might have been fatal to a mind of a feebler order, confesses that his life at Schulpforta was anything but favourable to his integrity. He found himself gradually reconciled to the necessity of ruling his conduct by the opinion of the little community around him, and compelled to practise occasionally the same artifices as others, if he would not with all his talents and industry be always left behind.

Into this microcosm of contending forces the boy of thirteen, nurtured amidst lonely hills and silent forests, now found himself thrown. The monastic gloom of the buildings contrasted at first most painfully with the joyous freedom of fields and woods, where he had been accustomed to wander at will; but still more painfully, the solitude of the moral desert. Shy and shrinking within himself, the tears which furnished only subjects of mockery to his companions were forced back, or taught to flow only in secret. Here however he learned the useful lesson of self-reliance, so well though so bitterly taught by want of sympathy in those around us; and from this time to the close of his life it was never forgotten. It was natural that the idea of escape should occur to a boy thus circumstanced, but the dread of being retaken and brought back in disgrace to Schulpforta occasioned hesitation. Whilst brooding over this project, it happened that he met with a copy of *Robinson Crusoe*, and his enthusiasm, the enthusiasm of thirteen, was kindled into a blaze. The desert should be his dwelling-place! On some far-off island of the ocean, beyond the reach of men and the students of Schulpforta, he would pass golden days of freedom and happiness. It was a common boyish notion, but the manner in which it was carried into execution shows traces of the character of the individual. Nothing could have been easier than for him to have taken his departure unperceived on one of the days when the scholars were allowed to go to the

playground; but he scorned to steal away in secret; he would have this step appear as the result of necessity and deliberate determination. He therefore made a formal declaration to his superior, a lad who had made a cruel and oppressive use of the brief authority entrusted him, that he would no longer endure the treatment he received, but would leave the place at the first opportunity. As may be supposed, the announcement was received with sneers and laughter; and Fichte now considered himself in all honour free to fulfil his resolution. It was easy to find an opportunity, and accordingly, having taken the precaution to study his proposed route on the map, he set off, and trudged on stoutly on the road to Naumburg. As he walked, however, he bethought himself of a saying of his beloved old pastor, that one should never begin an important undertaking without a prayer for Divine assistance; he turned therefore, and kneeling down on a green hillock by the roadside, implored, in the innocent sincerity of his heart, the blessing of Heaven on his wanderings. As he prayed it occurred to the new Robinson that his disappearance must occasion grief to his parents, and his joy in his wild scheme was gone in a moment. 'Never, perhaps, to see his parents again!' This terrible thought suddenly presented itself with such force that he resolved to retrace his steps, and meet all the punishments that might be in store for him, 'that he might look once more on the face of his mother.'

On his return, he met those who had been sent in pursuit of him; for as soon as he had been missed, the 'Obergesell' had given information of what had passed between them. When carried before the Rector, Fichte immediately confessed that he had intended to escape, and at the same time related the whole story with such straightforward simplicity and openness, that the Rector became interested, and not only remitted his punishment, but chose for him, among the elder lads, another master, who treated him with the greatest kindness, and to whom he became warmly attached.

Fichte had become a *Candidatus Theologiæ*, but his patron died, and with him died all hopes of being a clergyman. His

prospects were gloomy in the extreme; but he was relieved from anxiety by being offered the situation of private tutor in a family in Switzerland. He soon afterwards made acquaintance with Lavater and some other literary men. He also formed an attachment, which was to last him through life, with a niece of Klopstock.

Fichte's tutorship was remarkable. The parents of his pupils, although neither perfectly comprehending his plans, nor approving of that part which they did comprehend, were nevertheless such admirers of his moral character—they stood in such respectful awe of him—that they were induced to submit their own conduct with respect to their children to his judgment. We presume that all well-meaning tutors occasionally make suggestions to parents respecting certain points in their conduct towards the children; but Fichte's plan is, we fancy, quite unexampled in the history of such relations. He kept a journal, which he laid before them every week, and in which he had noted the faults of conduct of which they had been guilty. This lets us into the secret of Fichte's firm and truthful character, as much as anything we know about him. It was from such a soil that we might expect to find growing the moral doctrines which afterwards made his name illustrious. But this domestic censorship could not last long; it lasted for two years; and that it should have lasted so long is, as has been remarked, strong evidence of the respect in which his character was held. But it was irksome, insupportable, and ended at length in mutual dissatisfaction. He was forced to seek some other mode of subsistence. He went to Leipzig, where he gave private lessons in Greek and Philosophy, and became acquainted with the writings of Kant. This was an important event to him. Hear in what terms he speaks of it:—

‘I have been living, for the last four or five months in Leipzig, the happiest life I can remember. I came here with my head full of grand projects, which all burst one after another, like so many soap-bubbles, without leaving me so much as the froth. At first this troubled me a little, and, half

in despair, I took a step which I ought to have taken long before. Since I could not alter what was without me, I resolved to try and alter what was within. I threw myself into Philosophy—the Kantian, *videlicet*—and here I found the true antidote for all my evils, and joy enough into the bargain. The influence which this philosophy, particularly the ethical part of it (which however is unintelligible without a previous study of the *Kritik der reinen Vernunft*), has had upon my whole system of thought, the revolution which it has effected in my mind, is not to be described. To you especially I owe the declaration, that I now believe, with all my heart, in free will, and that I see that under this supposition alone can duty, virtue, and morality have any existence. From the opposite proposition, of the necessity of all human actions, must flow the most injurious consequences to society; and it may, in fact, be in part the source of the corrupt morals of the higher classes which we hear so much of. Should any one adopting it remain virtuous, we must look for the cause of his purity elsewhere than in the innocuousness of the doctrine. With many it is their want of logical consequence in their actions.

‘I am furthermore well convinced, that this life is not the land of enjoyment, but of labour and toil, and that every joy is granted to us but to strengthen us for further exertion; that the management of our own fate is by no means required of us, but only self-culture. I trouble myself therefore not at all concerning the things that are without; I endeavour not to appear, but to *be*. And to this perhaps I owe the deep tranquillity I enjoy; external position however is well enough suited to such a frame of mind. I am no man's master, and no man's slave. As to prospects, I have none at all, for the constitution of the church here does not suit me, nor, to say the truth, that of the people either. As long as I can maintain my present independence I shall certainly do so. I have been for some time working at an explanatory abridgment of *Kritik der Urtheilskraft* (Critical Inquiry into the Faculty of Judgment), but I am afraid I shall be obliged to come before

the public in a very immature state, to prevent being forestalled by a hundred vamped-up publications. Should the child ever make its appearance, I will send it to you.*

It was in consequence of his admiration of Kant, that, after several ineffectual attempts to settle himself, he went to Königsberg. Instead of a letter of introduction, Fichte presented Kant with a work, written in eight days, and which bore the title of *A Critique of every possible Revelation*. Kant at once recognized his peer, and received him warmly. But Kant himself, though celebrated, was neither rich nor influential. Fichte's affairs were desperate. We have his own confession in the fragments of a journal which he kept at the time:—

'28th August.—I yesterday began to revise my *Critique*. In the course of my meditation some new and excellent ideas were excogitated, which convinced me that my work was superficial. I endeavoured to carry out my investigation to-day; but my imagination led me so far away, that I could do nothing. I have reckoned my finances, and find that I have just enough to subsist on for a fortnight. It is true this is not the first time in my life that I have found myself in such an embarrassment, but I was then in my own country; besides, in growing older, one's sense of honour becomes more delicate, and distress is more and more of a hardship. . . . I have not been able to make any resolution. I certainly shall not speak on the subject to M. Borowsky, to whom Kant has given me an introduction. If I speak to any one, it shall be to Kant himself.

'1st Sept.—I have made a resolution which I must communicate to Kant. A situation as tutor, however reluctantly I might accept it, does not even offer itself; while, on the other hand, the incertitude in which I am placed does not allow me to work. I must return home. I can perhaps borrow from Kant the small sum necessary for my journey. I went to him to-day for that purpose, but my courage failed me; I resolved to write to him.

* It was never printed; probably because, as he here anticipates, he was forestalled.

'2nd Sept.—I finished my letter to Kant, and sent it.

'3rd Sept.—Received an invitation to dinner from Kant. He received me with his usual cordiality; but informed me that it would be quite out of his power to accede to my request for another fortnight. Such amiable frankness!

'I have done nothing lately; but I shall set myself to work, and leave the rest to Providence.

'6th Sept.—Dined with Kant, who proposed that I should sell the MS. of my *Critique* to Hartung the bookseller. "It is admirably written," said he, when I told him I was going to rewrite it. Is that true? It is Kant who says so.

'12th Sept.—I wanted to work to-day; but could do nothing. How will this end? What will become of me a week hence? Then all my money will be gone.'

These extracts will not be read without emotion. They paint a curious picture in the life of our philosopher: a life which was little more than a perpetual and energetic combat.

The *Critique* was published anonymously, and gained immense applause; partly, no doubt, because it was generally mistaken for the production of Kant himself. The celebrity acquired when the authorship was disclosed, was the means of procuring Fichte the chair of Philosophy at Jena, the offer of which was made him towards the end of 1793.

Jena was then the leading University of Germany; and Fichte might flatter himself that at length he had a settled position, in which he might calmly develop his scientific views. But his was a Fighter's destiny. Even here, at Jena, he found himself soon opposing and opposed. His endeavours to instil a higher moral feeling into the students—his anxiety for their better culture—only brought on him the accusation of endeavouring to undermine the religious institutions of his country; and his speculative views brought on him the charge of atheism.

Atheism is a grave charge, and yet how lightly made! The history of opinion abounds in instances of this levity; yet scarcely ever was a charge more groundless in appearance than that against Fichte, whose system was atheistic only in superficial appearance. Nevertheless the cry was raised, and

he had to battle against it. It is understood that the Government would have been willing to overlook the publication of the work which raised this cry, if Fichte had made any sort of explanatory modification; but he would not hear of it, tendered his resignation, and soon afterwards found an asylum in Prussia, where he occupied the Chair at Erlangen, and afterwards at Berlin. From his career at Berlin we will select one incident typical of his character.

The Students are assembled in crowds to hear their favourite professor, who is to lecture that day upon duty,—on that duty whose ideal grandeur his impassioned eloquence has revealed to them. Fichte arrives, calm and modest. He lectures with his usual dignified calmness, rising into fiery bursts of eloquence, but governed by the same marvellous rigour of logic as before. He leads them to the present state of affairs. On this topic he grows still more animated; the rolling of drums without frequently drowning his voice, and giving him fresh spirit. He points to the bleeding wounds of his country; he warms with hatred against oppressors; and enforces it as the duty of every one to lend his single arm to save his country.

‘This course of lectures,’ he exclaims, ‘will be suspended till the end of the campaign. We will resume them in a free country, or die in the attempt to recover her freedom.’ Loud shouts respondent ring through the hall; clapping of hands and stamping of feet make answer to the rolling drums without; every German heart there present is moved, as at the sound of a trumpet. Fichte descends; passes through the crowd; and places himself in the ranks of a corps of volunteers then departing for the army. It is the commencement of the memorable campaign of 1813.

In another year he was no more; he fell, not by a French bullet, but by the fever caught while tending his loved wife, who herself had fallen a victim to her attendance on unknown sufferers. On the 28th of January, 1814, aged fifty-two, this noble Fichte expired.

There are few characters which inspire more admiration

than that of Fichte; we must all admire ‘that cold, colossal, adamant spirit standing erect and clear, like a Cato Major among the degenerate men; fit to have been the teacher of the Stoa, and to have discoursed of beauty and virtue in the groves of Academe! So robust an intellect, a soul so calm, so lofty, massive, and immovable has not mingled in philosophical discussion since the time of Luther. For the man rises before us amid contradiction and debate like a granite mountain amid clouds and winds. Ridicule of the best that could be commanded has been already tried against him; but it could not avail. What was the wit of a thousand wits to him? The cry of a thousand choughs assailing that old cliff of granite; seen from the summit, these, as they winged the midway air, showed scarce so gross as beetles, and their cry was seldom even audible. Fichte’s opinions may be true or false; but his character as a thinker can be slightly valued only by those who know it ill; and as a man approved by action and suffering, in his life and in his death, he ranks with a class of men who were common only in better ages than ours.’*

§ II. FICHTE’S HISTORICAL POSITION.

Kant’s *Criticism*, although really leaving Scepticism in possession of the field, was nevertheless believed to have indicated a new domain, in which a refuge might be found. The thought soon suggested itself that on this domain an indestructible temple might be erected. Kant had driven the piles deep down into the earth—a secure foundation was made; but Kant had declined building.

Jacobi, for one, saw in the principles of ‘criticism’ a path on which he could travel. He maintained, that just as Sense was, according to Kant, a faculty whereby we perceived material things, so also was Reason a sense, a faculty, whereby we perceive the supersensual.

It was indeed soon evident that men would not content

* CARLYLE.

themselves with the mere negation to which Kant had reduced our knowledge of things *per se*. It was the positive part of his system they accepted and endeavoured to extend. This attempt forms the matter of all the subsequent history of German Philosophy till Hegel. We will briefly state the nature of the discussions which the result of Kant's system had rendered imperative.

Kant had postulated the existence of an object as the necessary correlate to a subject. Knowledge was both objective and subjective; but inasmuch as it was thus inseparably twofold, it could never penetrate the essence of things—it could never know the object—it could only know phenomena. Hence the problem was:—

What is the relation of object and subject?

To solve this, it was necessary to penetrate the essence of things, to apprehend noumena. All the efforts of men were therefore to be directed towards this absolute science. The ground of all certitude being in the *à priori* ideas, an attempt was made to construct *à priori* the whole system of human knowledge.

The Ego was the necessary basis of the new edifice. Consciousness, as alone certain, was proclaimed the ground upon which absolute science must rest.

Fichte's position is here clearly marked out. His sole object was to construct a science out of consciousness, and thereon to found a system of morals.

Let us at the outset request the reader to give no heed to any of the witticisms which he may hear, or which may suggest themselves to him on a hasty consideration of Fichte's opinions. That the opinions are not those of ordinary thinkers, we admit; that they are repugnant to all 'common sense,' we must also admit; that they are false, we believe: but we also believe them to have been laborious products of an earnest mind, the consequences of admitted premisses, drawn with singular audacity and subtlety, and no mere caprices of ingenious speculation—no paradoxes of an acute but trifling mind.

It was within him that he found a lamp to light him on his path. Deep in the recesses of his soul, beneath all understanding, superior to all logical knowledge, there lay a faculty by which truth, absolute truth, might be known.

'I have found the organ,' he says in his *Bestimmung des Menschen*, 'by which to apprehend all reality. It is not the understanding; for all knowledge supposes some higher knowledge on which it rests, and of this ascent there is no end. It is Faith, voluntarily reposing on views naturally presenting themselves to us, *because* through these views alone we can fulfil our destiny, which sees our knowledge, and pronounces that 'it is good,' and raises it to certainty and conviction. It is no knowledge, but a resolution of the will to admit this knowledge. This is no mere verbal distinction, but a true and deep one, pregnant with the most important consequences. Let me for ever hold fast by it. All my conviction is but faith, and it proceeds from the will and not from the understanding; from the will also, and not from the understanding, must all the true culture proceed. Let the first only be firmly directed towards the Good, the latter will of itself apprehend the True. Should the latter be exercised and developed while the former remains neglected, nothing can come of it but a facility in vain and endless sophistical subtleties refining away into the absolutely void inane. I know that every seeming truth, born of thought alone, and not ultimately resting on faith, is false and spurious; for knowledge, purely and simply such, when carried to its utmost consequences, leads to the conviction that we can know nothing! Such knowledge never finds anything in the conclusions, which it has not previously placed in the premisses by faith; and even then its conclusions are not always correct. . . . Every human creature born into the world has unconsciously seized on the reality which exists for him alone through this intuitive faith. If in mere knowledge—in mere perception and reflection—we can discover no ground for regarding our mental presentations as more than mere pictures, why do we all nevertheless regard them

as more, and imagine for them a basis, a *substratum* independent of all modifications? If we all possess the capacity and the instinct to go beyond this natural view of things, why do so few of us follow this instinct, or exercise this capacity?—nay, why do we even resist with a sort of bitterness when we are urged towards this path? What holds us imprisoned in these natural boundaries? Not inferences of our reason; for there are none which could do this. It is our deep interest in reality that does this—in the good that we are to produce—in the common and the sensuous that we are to enjoy. From this interest can no one who lives detach himself, and just as little from the faith which forces itself upon him simultaneously with his existence. We are all born in faith, and he who is blind follows blindly the irresistible attraction. He who sees follows by sight, and believes because he will believe.*

Here the limit, set by Kant, is overleaped: a knowledge of realities is affirmed. But it is not enough to affirm such a knowledge; we must prove it. To prove this is the mission of Philosophy.

Fichte, who thought himself a true Kantist, although Kant very distinctly and publicly repudiated him, declared that the materials for a science had been discovered by Kant; nothing more was needed than a systematic co-ordination of these materials: and this task he undertook in his famous Doctrine of Science (*Wissenschaftslehre*). In this he endeavoured to construct *à priori* all knowledge.

§ III. BASIS OF FICHTE'S SYSTEM.

We are supposed to perceive external objects through the ideas which these objects excite in us. But this assumption is not warranted by the facts of consciousness. What is the fundamental fact? It is that I have in my mind a certain idea. This, and this only, is primarily given. When we leave this fact in quest of an explanation, we are forced to

* *Destination of Man*, translated by Mrs. PERCY SINNETT: London, 1846.

admit either that this idea is spontaneously evolved *by me*; or else some *not-me*—something different from myself has excited it *in me*. Idealism or Dualism?

Kant, unwilling to embrace idealism, and unable to conceive how the Ego spontaneously evolved within itself ideas of that which it regarded as different from itself, postulated the existence of a Non-Ego, but declared that we knew nothing of it. In this he followed Locke, and the majority of philosophers.

Truly, said Fichte, we know nothing of it; we can only know that which passes within ourselves. Only so much as we are *conscious* of, can we know; but in consciousness there is no object given, there is only an idea given. Are we forced by the very laws of our reason to suppose that there is Non-Ego existing?—are we forced to assume that these ideas are images of something *out* of us and independent of us? To what does this dilemma bring us? Simply to this: that the very assumption, here called a necessary consequence of our mental constitution—this Non-Ego, which must be postulated, is, after all, nothing but a postulate of our reason; is therefore a *product of the Ego*. It is the Ego which thus creates the necessity for a Non-Ego; it is the Ego which thus, answering to the necessity, creates the Non-Ego wanted. Ideas, and nothing but ideas, are given in the primary fact of consciousness. These are the products of the *activity* of the Ego; and not, as is so commonly asserted, the products of the *passivity* of the Ego. The soul is no passive mirror reflecting images. It is an active principle creating them. The soul is no lifeless *receptivity*. Were it not brimming over with life and activity, perception would be impossible. One stone does not perceive another. A mould does not perceive the liquid that is poured into it.

Consciousness is in its very essence an activity. Well then, if in its activity it produces images, and if by the laws of its nature it is forced to assume that these images have some substratum, what is this assumption but *another* form of the soul's activity? If the Ego is conscious of its changes; and

yet is forced to attribute these changes to some external cause, what is this very act of assuming an external cause but the pure act of the Ego?—another change in the consciousness?

You admit that we cannot know Substance; all our knowledge is limited to accidents—to phenomena. But, you say, you are forced to assume a Substance as the basis of these accidents—a noumenon as that whereby phenomena are possible; and yet you cannot *know* this noumenon. Fichte answers: If you cannot *know* it, your assumption, as the mere product of your reason, is nothing more nor less than another form of the activity of the Ego. It is *you* who assume; and you assume *what* you call Substance. Substance is nothing but the *synthesis of accidents*. And it is a mental synthesis.

Thus Fichte founded Idealism upon the basis of consciousness, which was the admitted basis of all certitude; and he not only founded Idealism, but reduced the Ego to an activity, and all *knowledge* to an *act*.

The activity of the Ego is of course an assumption, but it is the only assumption necessary for the construction of a science. That once admitted, the existence of the Non-Ego, as a product of the Ego, follows as a necessary consequence.

Every one will admit that $A=A$; or that *A is A*. This is an axiom which is known intuitively, and has no need of proof. It is the proposition of absolute identity (*Satz der Identität*). It is absolutely true. In admitting this to be absolutely true, we ascribe to the mind a faculty of knowing absolute truth.

But in saying *A equals A*, we do not affirm the *existence* of *A*; we only affirm that *if A exist*, then it must equal *A*. And the axiom teaches us not that *A exists*; but there is a necessary relation between a certain *if* and *then*; and this necessary relation we will call *x*. But this relation, this *x*, is only *in* the Ego, comes only *from* the Ego. It is the Ego that judges in the preceding axiom that $A=A$; and it judges by means of *x*.

To reduce this to language a little less scholastic, we may say that, in every judgment which the mind makes, the act of judging is an act of the Ego.

But as the *x* is wholly in the Ego, so therefore is *A in* the Ego, and is posited *by* the Ego. And by this we see that there is *something* in the Ego which is for ever one and the same, and that is the *x*. Hence the formula, '*I am I: Ego = Ego.*'

We come here to the *Cogito, ergo sum*, of Descartes, as the basis of all certitude. The Ego posits itself, and *is* by means of this very self-positing. When I say '*I am*,' I affirm, in consciousness, my existence; and this affirmation of my consciousness is the condition of my existence. The Ego is therefore at one and the same time both the activity and the product of activity; precisely as thought is both the thinking activity, and the product thought.

We will, for the present, spare the reader any further infliction of such logical abstractions. He will catch in the foregoing a glimpse of Fichte's method, and be in some way able to estimate the strength of the basis on which Idealism reposes.

The great point Fichte has endeavoured to establish is the identity of being and thought—of existence and consciousness—of object and subject. And he establishes this by means of the Ego considered as essentially an activity.

Hence the conclusion drawn in the practical part of his philosophy that the true destination of man is not thought, but action, which is thought realized. '*I am free*,' he says. That is the revelation of consciousness. '*I am free*; and it is not merely my action, but the free determination of my will to obey the voice of conscience, that decides all my worth. More brightly does the everlasting world now rise before me; and the fundamental laws of its order are more clearly revealed to my mental sight. My *will alone*, lying hid in the obscure depths of my soul, is the first link in a chain of consequences stretching through the invisible realms of spirit, as in this terrestrial world the action itself, a certain

movement communicated to matter, is the first link in a material chain of cause and effect, encircling the whole system. The will is the efficient cause, the living principle of the world of spirit, as motion is of the world of sense. I stand between two worlds, the one visible, in which the act alone avails, and the intention matters not at all; the other invisible and incomprehensible, acted on only by the will. In both these worlds I am an effective force. The Divine life, as alone the finite mind can conceive it, is self-forming, self-representing will, clothed, to the mortal eye, with multitudinous sensuous forms, flowing through me and through the whole immeasurable universe, here streaming through my veins and muscles,—there, pouring its abundance into the tree, the flower, the grass. The dead, heavy mass of inert matter, which did but fill up nature, has disappeared, and, in its stead, there rushes by the bright, everlasting flood of life and power, from its Infinite Source.

‘The Eternal Will is the Creator of the world, as he is the Creator of the finite reason. Those who will insist that the world must have been created out of a mass of inert matter, which must always remain inert and lifeless, like a vessel made by human hands, know neither the world nor Him. The Infinite Reason alone exists in himself—the finite in him; in our minds alone has he created a world, or at least that by and through which it becomes unfolded to us. In his light we behold the light, and all that it reveals. Great, living Will! whom no words can name, and no conception embrace! well may I lift up my thoughts to thee, for I can think only in thee. In thee, the Incomprehensible, does my own existence, and that of the world, become comprehensible to me; all the problems of being are solved, and the most perfect harmony reigns. I veil my face before thee, and lay my finger on my lips.’

§ IV. FICHTE’S IDEALISM.

The ground-principle of Fichte’s idealism having been

given, we have now to see how he avoids the natural objections which rise against such a doctrine. But first let us notice how this deification of personality was at once the most natural product of such a mind as Fichte’s, and the best adapted to the spirit of the age which produced it. His doctrine was an inspiration of that ardent and exalted spirit which stirred the heart of Germany, and made the campaign of 1813 an epoch in history. Germany then was deficient in energetic will. It had armies, and these armies were headed by experienced generals. But among them there was scarcely another, beyond the impetuous Blücher, who had steadfast will. They were beaten and beaten. At length they were roused. A series of insults had roused them. They rose to fight for fatherland; and in their ranks was Fichte, who by deed as well as doctrine sought to convince them that in Will lay man’s divinity.

The question being, *What is the relation of Object and Subject?* and Fichte’s solution being *Object and Subject are identical*, it followed from his position that inasmuch as an Object and a Subject—a Non-Ego and an Ego—were given in knowledge, and the distinction between them by all men supposed to be real, the origin of this distinction must arise in one of two ways: either the Ego must posit the Non-Ego, wilfully and consciously (in which case mankind would never suppose the distinction to be a real distinction); or else the Ego must cause the Non-Ego to be, and must do so necessarily and unconsciously.

How does Fichte solve the problem? He assumes that the existence of the very Ego itself is *determined** by the Non-Ego; and in this way: To be, and to be conscious, are the same. The existence of the Ego depends upon its consciousness. But to be conscious of Self is at the same

* The German word *bestimmen*, which we are forced to translate ‘to determine,’ is of immense use to the metaphysicians; we would gladly have substituted some other equivalent, could we have found one to represent the meaning better. To determine, in philosophy, does not mean (as in ordinary language), to resolve, but to render definite. Chaos, when *determined*, is the created world.

time to be conscious of Not-Self; the correlates Self and Not-Self are given in the same act of consciousness. But how is it that we attribute reality to Not-self? Just as we attribute reality to Self, namely, by an act of Consciousness. Not-Self is given in Consciousness as a *reality*, and therefore we cannot suppose it to be a phantom.

We may pause here to remark how all the witticisms against Idealism fall to the ground. The wits assume that when it is said the World is produced by the Ego, this World must be held as a phantom. Now nobody ever believed that external objects had no reality; the only possible doubt is as to whether they have any reality *independent* of mind.

In consciousness we have a twofold fact, namely, the fact of Self, and the fact of Not-Self, indissolubly given in one. We conclude therefore that Consciousness—that the Ego—is partly self-determined, and partly determined by not-self. Let us suppose the entire reality of the Ego (that is, in its identity of Subject and Object) represented by the number ten. The Ego, conscious of five of its parts—or, to speak with Fichte—*positing* five, does by that very act posit five parts *negatively* in itself. But how is it that the Ego can posit a negation in itself? It does so by the very act of Consciousness; in the act of separating five from ten, the five remaining are left passive. The negation is therefore the passivity of the Ego. This seems to lead to the contradiction that the Ego, which was defined as an Activity, is at the same time active and passive. The solution of this difficulty is that it is Activity which determines Passivity, and reciprocally. Let us suppose the absolute reality as a Sphere; this is entirely in the Ego, and has a certain quantity. Every quantity less than this totality will, of necessity, be negation, passivity. In order that a less quantity should be compared with the totality and so opposed to it, it is necessary there should be some relation between them; and this is in the idea of divisibility. In the absolute totality, as such, there are no parts; but this totality may be compared with parts and distinguished from it.

Passivity is therefore a determinate quantity of Activity, a quantity compared with the totality. In regard to the Ego as absolute, the Ego as limited is passive; in the relation of Ego as limited to the Non-Ego, the Ego is active and the Non-Ego passive. And thus are activity and passivity reciprocally determined.

The result of this and much more reasoning, is the hypothesis that when mankind attribute to objects a real existence they are correct; but they are incorrect in supposing that the Object is independent of the Subject: it is identical with the Subject. The common-sense belief is therefore correct enough. It is when we would rise above this belief, and endeavour to philosophize, that we fall into error. All the philosophers have erred, not in assuming the *reality* of objects, but in assuming the reality of *two* distinct, disparate existences, Matter and Mind; whereas we have seen that there is only one existence, having the twofold aspect of Object and Subject.

Nor is the distinction unimportant. If Dualism be accepted, we have no refuge from Scepticism. If we are to believe that *Dinge an sich* exist—that Matter exists independently of Mind, exists *per se*—then are we doomed to admit only a knowledge of phenomena as possible. The things in themselves we can never know; we can only know their effects upon us. Our knowledge is relative, and never can embrace the absolute truth.

But if Idealism be accepted, the ordinary belief of men is not only respected but confirmed; for this belief is that we *do* know things in themselves, and that the things we know *do* exist. The Dualist forces you to admit that you *cannot* know things in themselves; and that your belief in their existence is merely the postulate of your Reason, and is not *immediately* given in the facts of Consciousness. The Idealist, on the contrary, gives you an *immediate* knowledge of things in themselves, consequently opens to you the domain of absolute Truth. He only differs from you in saying that these things, which you immediately know, are part and

parcel of yourself; and it is *because* you and they are indissolubly united, that immediate knowledge is possible.

'But,' says Realism, 'I know that objects are altogether independent of *me*. I did not create them. I found them there, *out* of me. The proof of this is that if, after looking at a tree, I turn away, or shut my eyes, the image of the tree is annihilated, but the tree itself remains.'

'No,' answers Idealism, 'the tree itself does not remain: for the tree is but a phenomenon, or collection of phenomena;—the tree is a Perception, and all perceptions are subjective. You suppose that every one must admit that our perceptions are different from their objects. But are they different? that is precisely the question at issue; and you assume it. Let us be cautious. What is an object—a tree for instance? Tell me, what does your Consciousness inform you of? Let me hear the fact, the whole fact, and no *inference* from the fact. Is not the *object* (tree) one and the same as your *perception* (tree)? Is not the tree a mere name for your perception? Does not your Consciousness distinctly tell you that the Form, Colour, Solidity, and Smell of the Tree are *in you*—are affections of your Subject?'

'I admit that,' replies Realism; 'but although these are *in me*, they are caused by something *out of me*. Consciousness tells me that very plainly.'

'Does it so? I tell you that Consciousness has no such power. It can tell you of its own changes; it cannot transcend itself to tell you anything about that which causes its changes.'

'But I am irresistibly compelled to believe,' says Realism, 'that there are things which exist *out* of me; and this belief, because irresistible, is true.'

'Stop! you run on too fast,' replies Idealism; your belief is not what you describe it. You are not irresistibly compelled to believe that things exist, which said things lie *underneath* all their appearances, and must ever remain unknown. This is no instinctive belief; it is a philosophic inference. Your belief simply is, that certain things,

coloured, odorous, extended, sapid, and solid, exist; and so they do. But you infer that they exist *out* of you? Rash inference. Have you not admitted that colour, odour, taste, extension, etc., are but modifications of your sentient being; and if they exist *in* you, how can they exist *out* of you? They do not: they seem to do so by a law of the mind which gives objectivity to our sensations.' *

'Try your utmost to conceive an object as anything more than a synthesis of perceptions. You cannot. You may infer indeed that a *substratum* for all phenomena exists, although unknown, unknowable. But on what is your inference grounded? On the impossibility of conceiving the existence of qualities—extension, colour, etc.—apart from some substance of *which* they are qualities. This impossibility is a figment. The qualities have no need of an objective substratum, because they have a *subjective* substratum: they are the modifications of a sensitive subject; and the synthesis of these modifications is the only substratum of which they stand in need. This may be proved in another way. The qualities of objects, it is universally admitted, are but modifications of the subject: these qualities are *attributed* to external objects; they are dependent upon the subject for their existence; and yet, to account for their existence, it is asserted that some unknown external substance must exist as a substance in which they must inhere. Now it is apparent that inasmuch as these qualities are subjective and dependent upon the subject for their existence, there can be no necessity for an object in which they must inhere.' Thus may Idealism defend itself against Realism.

We have made ourselves the advocates of Fichte's principles, but the reader will not mistake us for disciples of Fichte. In the exposition of his system we have, for obvious reasons, generally avoided his own manner, which

* The difference between BERKELEY and FICHTE is apparent here. The former said that the objects *did* exist independent of the Ego, but did *not* exist independent of the universal Mind. FICHTE's Idealism was *Egoism*; BERKELEY's was a theological Idealism.

is too abstract to be followed without difficulty, and we have endeavoured to state his ideas in our own way.

To exhibit Fichte's Idealism is, strictly speaking, all that our plan imposes on us; but although his philosophical doctrines are all founded upon it, and although it was the doctrine which made an epoch in German Philosophy, consequently the doctrine which entitles him to a place in this History, nevertheless we should be doing him injustice and misleading our readers if we did not give some glimpse of his moral system. The Idealism, as Idealism, seems little better than an ingenious paradox: only when we see it applied can we regard it as serious.*

§ V. APPLICATION OF FICHTE'S IDEALISM.

The Ego is essentially an Activity; consequently free. But this free activity would lose itself in infinity, and would remain without consciousness—in fact, without existence—did it not encounter some *resistance*. In the effort to vanquish this resistance, it exerts its will, becomes conscious of something not itself, and *thereby* becomes conscious of itself. But resistance limits freedom, and as an Activity the Ego is essentially free—it is irresistibly impelled to enjoy perfect freedom. This expansive force, which impels the Ego to realize itself by complete development, and thereby assimilating the Non-Ego—this force, in as far as it is not realized, is the *aim* of man's existence—it is his duty.

Here a difference from the ordinary schools of morality begins to show itself. Duty is not a moral obligation which

* Those who are curious to see what he himself makes of his system are referred to his *Wissenschaftslehre* (of which a French translation by M. PAUL GRIMBLAT exists under the title of *Doctrine de la Science*), or, as a more popular exposition, to his *Bestimmung des Menschen*, a French translation of which has been published by M. BARCHEV DE PENHOEN, under the title *Destination de l'Homme*, which from the character and learning of the translator, is, we have no doubt, an excellent version. An English translation has also been made by Mrs. PERCY SINNETT, which can be recommended. FICHTE's work, *The Nature of the Scholar*, has also recently appeared by Mr. W. SMITH, who has also translated the *Characteristics of the Present Age*.

we are free to acknowledge or reject; it is a pulse beating in the very heart of man—a power inseparable from his constitution; and according to its fulfilment is the man complete.

The world does not exist because we imagine it, but because we *believe* it. Let all reality be swept away by scepticism—we are not affected. Man is impelled by his very nature to realize his existence by his acts. Our destination is not thought, but action. Man is not born to brood over his thoughts, but to manifest them—to give them existence. There is a moral world *within*; our mission is to transport it *without*. By this we create the world. For what is the condition of existence?—what determines Thought to *be*? Simply that it should realize itself as an object. The Ego as *simple Subject* does not exist; it has only a potentiality of existence. To exist, it must realize itself and become *Subject-Object*.

Mark the consequence:—Knowing that we carry within us the moral world, and that upon ourselves alone depends the attainment of so sublime an object as the manifestation of this world, it is to ourselves alone that we must direct our attention. This realization of the world, what is it but the complete development of ourselves? If we would *be*, therefore—if we would enjoy the realities of existence, we must develop ourselves in the attempt to incessantly realize the beautiful, the useful, and the good. Man is commanded to be moral by the imperious necessity of his own nature. To be virtuous is not to obey some external law, but to fulfil an internal law: this obedience is not slavery, but freedom; it is not sacrificing one particle of freedom to any other power, but wholly and truly realizing the power within us of being free.

Life is a combat. The free spirit of man, inasmuch as it is finite, is limited, imperfect; but it incessantly struggles to subjugate that which opposes it—it tends incessantly towards infinity. Defeated in his hopes, he is sometimes discouraged, but this lasts not long. There is a well-spring

of energy for ever vital in the heart of man; an ideal is for ever shining before him, and that he must attain.

Man knows himself to be free; knows also that his fellow-men are free; and therefore the duty of each is to treat the others as beings who have the same aim as himself. Individual liberty is therefore the principle of all government: from it Fichte deduces his political system.

And what says Fichte respecting God? He was, as we know, accused of atheism. Let us hear his real opinions. In his answer to that charge we have an abstruse, but at the same time positive, exposition of his views.* God created the world out of an inert mass of matter; and from the evidence of design in this created world we infer an intelligent designer. This is the common view; but Fichte could not accept it. In the first place, what we call the World is but the incarnation of our Duty (*unsere Welt ist das versinnlichte Material unserer Pflicht*). It is the objective existence of the Ego: we are, so to speak, the creators of it. Such a statement looks very like atheism, especially when Fichte's system is not clearly apprehended: it is, however, at the worst, only Acosmism.

Nor could Fichte accept the evidence of Design, because Design is a mere conclusion of the understanding, applicable only to finite, transient things, wholly inapplicable to the infinite: Design itself is but a subjective notion.†

'God,' says Fichte, 'must be *believed* in, not *inferred*. Faith is the ground of all conviction, scientific or moral. Why do you believe in the existence of the world? It is nothing more than the incarnation of that which you carry within you, yet you believe in it. In the same way God exists in your Consciousness and you believe in him. He is the Moral Order (*moralische Ordnung*) of the world: as such we can know him, and only as such. For if we attempt to attribute to him Intelligence or Personality, we at once necessarily fall into anthropomorphism. God is infinite:

* *Gerichtliche Verantwortungsschriften gegen die Anklage des Atheismus.*

† *Ibid.* p. 43.

therefore beyond the reach of our *science*, which can only embrace the finite, but not beyond our *faith*.*

By our efforts to fulfil our Duty, and thus to realize the Good and Beautiful, we are tending towards God, we live in some measure the life of God. True religion is therefore the realization of universal reason. If we were all perfectly free, we should be one; for there is but one Liberty. If we had all the same convictions, the law of each would be the law of all, since all would have but one Will. To this we aspire; to this Humanity is tending.

The germ of mysticism which lies in this doctrine was fully developed by some of Fichte's successors, although he himself had particularly guarded against such an interpretation, and distinguishes himself from the mystics.

Let us now pass to Fichte's Philosophy of History.

The historian only accomplishes half of the required task. He narrates the events of an epoch, in their order of occurrence, and in the form of their occurrence; but he cannot be assured that he has not omitted some of these events, or that he has given them their due position and significance. The philosopher must complete this incomplete method. He must form some idea of the epoch—an Idea *à priori*, independent of experience. He must then exhibit this Idea always dominant throughout the epoch—and manifesting itself in all the multiplicity of facts, which are but its incarnation. What is the world but an incarnation of the Ego? What is an epoch but an incarnation of an Idea?

Every epoch has therefore its *pré-existent* Idea. And this Idea will be determined by the Ideas of the epochs which have preceded it; and will determine those which succeed it. Hence we conclude that the evolutions of Ideas—or the History of the World—is accomplished on a certain *plan*. The philosopher must conceive this plan in its totality, that he may from it deduce the Ideas of the principal epochs in the history of Humanity, not only as past, but as future.

The question first to be settled is this: What is the ground-

* *Sittenlehre*, pp. 189, 194.

plan of the world? or, in other words, according to Fichte, What is the fundamental Idea which Humanity has to realize?

The answer is: The Idea of Duty. This, in its concrete expression, is: To fix the relations of man to man in such order that the perfect liberty of each be compatible with the liberty of the whole.

History may thus be divided into two principal epochs. The one, in which man has not established the social relations on the basis of reason. The other, in which he has established them, and knows that he has done so.

That Humanity exists but for the successive and constant realization of the dictates of reason is easily proved. But sometimes Humanity has knowledge of what it performs, and why it performs it; sometimes it obeys but a blind impulse. In this second case, that is to say, in the first epochs of the terrestrial existence of Humanity, Reason, although not manifesting itself distinctly, consciously, nevertheless exists. It manifests itself as an instinct, and appears under the form of a natural law; it manifests itself in the intelligence only as a vague and obscure sentiment. Reason, on the contrary, no sooner manifests itself as Reason, than it is gifted with consciousness of itself and its acts. This constitutes the second epoch.

But Humanity does not pass at once from the first to the second epoch. At first Reason only manifests itself in a few men, the Great Men of their age, who thereby acquire authority. They are the instructors of their age; their mission is to elevate the mass up to themselves. Thus Instinct diminishes, and Reason supervenes. Science appears. Morality becomes a science. The relations of man to man become more and more fixed in accordance with the dictates of reason.

The entire life of Humanity has five periods. I. The domination of Instinct over Reason: this is the primitive age. II. The general Instinct gives place to an external dominant Authority: this is the age of doctrines unable to convince, and

employing force to produce a blind belief, claiming unlimited obedience; this is the period in which Evil arises. III. The Authority, dominant in the preceding epoch, but constantly attacked by Reason, becomes weak and wavering: this is the epoch of scepticism and licentiousness. IV. Reason becomes conscious of itself; truth makes itself known; the science of Reason develops itself: this is the beginning of that perfection which Humanity is destined to attain. V. The science of Reason is applied; Humanity fashions itself after the ideal standard of Reason: this is the epoch of Art, the last term in the history of our species.

CHAPTER II.

SCHELLING.

§ I. LIFE OF SCHELLING.

FREDERICK WILLIAM JOSEPH SCHELLING was born in Leonberg, in Würtemberg, 27th of January, 1775. At the University in Tübingen he first knew Hegel, and their friendship was enduring and productive. At Leipzig he studied Medicine and Philosophy; in the latter he became the pupil of Fichte. He afterwards filled Fichte's vacant chair at Jena, where he lectured with immense success. In 1807 he was made a member of the Munich Academy of Sciences. And in Bavaria, honoured, rewarded and ennobled, he remained till 1842, when the King of Prussia seduced him to Berlin; and there, in the chair once held by Hegel, he opened a series of lectures, in which he was to give the fruit of a life's meditation.

His appearance at Berlin was the signal for violent polemics. The Hegelians were all up in arms. Pamphlets, full of personalities and dialectics, were launched against Schelling, apparently without much effect. His foes at length grew weary of screaming; and he continued quietly to lecture. In 1845 I had the gratification not only of hearing him lecture on Mythology to large audiences, but also of hearing him in the expansiveness of private conversation pour forth his stores of varied knowledge. His intellectual vigour was such, that although seventy summers had whitened his hair, he seemed to have still a long lease of life; and indeed he continued nine years longer to inspire the respect of all who knew him. He died on the 20th August, 1854.

§ II. SCHELLING'S DOCTRINES.

Schelling is often styled the German Plato. In such parallels there is always some truth amidst much error. Schelling's works unquestionably exhibit great power of vivid imagination conjoined with subtle dialectics; if on this ground he is to be styled a Plato, then are there hundreds to share that title with him. His doctrines have little resemblance to those of his supposed prototype. Curiously enough, his head was marvellously like that of Socrates; not so ugly, but still very like it in general character.

Schelling may be regarded as having been the systematizer of a tendency, always manifesting itself, but then in full vigour in Germany—the tendency towards Pantheism. This tendency is not merely the offspring of mysticism. It may be recognized in the clear Goethe, no less than in the mystical Novalis. In some way or other, Pantheism seems the natural issue of almost every Philosophy of Religion, when rigorously carried out; but Germany, above all European countries, has, both in poetry and speculation, the most constantly reproduced it. Her poets, her artists, her musicians, and her thinkers, have been more or less pantheists. Schelling's attempt therefore to give Pantheism a scientific basis could not but meet with hearty approbation.

We may here once more notice the similarity, in historical position, of the modern German speculations to those of the Alexandrian Schools. In both the incapacity of Reason to solve the problems of Philosophy is openly proclaimed; in both some higher faculty is called in to solve them. Plotinus called this faculty *Ecstasy*. Schelling called it the *Intellectual Intuition*. The Ecstasy was not supposed to be a faculty possessed by all men, and at all times; it was only possessed by the few, and by them but sometimes. The Intellectual Intuition was not supposed to be a faculty common to all men; on the contrary, it was held as the endowment only of a few of the privileged: it was the faculty for philosophising. Schelling expresses his disdain for those who talk about not

comprehending the highest truths of Philosophy. 'Really,' he exclaims, 'one sees not wherefore Philosophy should pay any attention whatever to Incapacity. It is better rather that we should isolate Philosophy from all the ordinary routes, and keep it so separated from ordinary knowledge that none of these routes should lead to it. Philosophy commences where ordinary knowledge terminates.'* The highest truths of science cannot be proved, they must be apprehended; for those who cannot apprehend them there is nothing but pity: argument is useless.

After this, were we to call Schelling the German Plotinus, we should perhaps be nearer the truth than in calling him the German Plato. But it was for the sake of no such idle parallel that we compared the fundamental positions of each. Our object was to 'point a moral,' and to show how the same forms of error re-appear in history, and how the labours of so many centuries have not advanced the human mind in this direction one single step.

The first point to be established is the nature of Schelling's improvement upon Fichte: the relation in which the two doctrines stand to each other.

Fichte's Idealism was purely subjective Idealism. The Object had indeed reality, but was solely dependent upon the Subject. Endeavour as we might, we could never separate the Object from the Subject, we could never conceive a possible mode of existence without being forced to identify with it a Subject. Indeed the very conception itself is but an act of the Subject. Admitting that we are forced by the laws of our mental constitution to postulate an unknown something, a Noumenon, as the substance in which all phenomena inhere, what, after all, is this postulate? It is an act of the Mind; it is wholly subjective; the necessity for the postulate is a mental necessity. The Non-Ego therefore is the product of the Ego.

There is subtle reasoning in the above; nay more, it contains a principle which is irrefutable: the principle of the identity

* *Neue Zeitschrift für speculative Physik*, ii. 34.

of Object and Subject in knowledge.* This Schelling adopted. Nevertheless, in spite of such an admission, the nullity of the external world was too violent and repulsive a conclusion to be long maintained; and it was necessary to see if the principle of identity might not be preserved, without forcing such a conclusion.

The existence of the objective world is as firmly believed in as the existence of the subjective: they are, indeed, both given in the same act. We cannot be conscious of our own existence without at the same time inseparably connecting it with some other existence from which we distinguished ourselves. So in like manner we cannot be aware of the existence of anything out of ourselves without at the same time inseparably connecting with it a consciousness of ourselves. Hence we conclude that both exist; not indeed separately, not independently of each other, but *identified* in some higher power. Fichte said that the Non-Ego was created by the Ego. Schelling said that the two were equally real, and that both were identified in the Absolute.

Knowledge must be knowledge of something. Hence knowledge implies the correlate of Being. Knowledge without an Object known, is but an empty form. But Knowledge and Being are correlates; they are not separable; they are identified. It is as impossible to conceive an Object known without a Subject knowing, as it is to conceive a Subject knowing without an Object known.

Nature is Spirit visible; Spirit is invisible Nature:† the absolute Ideal is at the same time the absolute Real.

Hence Philosophy has two primary problems to solve. In the *Transcendental Philosophy* the problem is to construct Nature from Intelligence—the Object from the Subject. In

* This is the stronghold of Idealism, and we consider it impregnable, so long as men reason on the implied assumption, that whatever is true in human knowledge is equally true (i. e. actually so co-ordinated) in *fact*; that as things appear to us so they are *per se*. And yet without this assumption Philosophy is impossible.

† Our readers will recognize here a favourite saying of COLERIDGE, many of whose remarks, now become famous, are almost *verbatim* translations from SCHELLING and the two SCHLEGELS.

the *Philosophy of Nature* the problem is to construct Intelligence from Nature—the Subject from the Object.* And how are we to construct one from the other? Fichte has taught us to do so by the principle of the identity of Subject and Object, whereby the productivity and the product are in constant opposition, yet always one. The productivity (*Thätigkeit*) is the activity in act; it is the force which develops itself into all things. The product is the activity arrested and solidified into a fact; but it is always ready to pass again into activity. And thus the world is but a balancing of contending powers within the sphere of the Absolute.

In what, then, does Schelling differ from Fichte, since both assert that the product (Object) is but the arrested activity of the Ego? In this: the Ego in Fichte's system is a finite Ego—it is the human soul. The Ego in Schelling's system is the Absolute—the Infinite—the All which Spinoza called Substance; and this Absolute manifests itself in two forms: in the form of the Ego and in the form of the Non-Ego—as Nature and as Mind.

The Ego produces the Non-Ego, but not by its own force, not out of its own nature; it is universal Nature which works within us and which produces from out of us; it is universal Nature which here in us is conscious of itself. The souls of men are but the innumerable individual eyes with which the Infinite World-Spirit beholds himself.

What is the Ego? It is one and the same with the act which renders it an Object to itself. When I say 'myself'—when I form a conception of my Ego, what is that but the Ego making itself an Object? Consciousness therefore may be defined the objectivity of the Ego. Very well; now apply this to the Absolute. He, too, must be conscious of himself, and for that he must realize himself objectively. We can now understand Schelling when he says, 'The blind and unconscious products of Nature are nothing but unsuccessful attempts of Nature to make itself an Object (*sich selbst zu reflectiren*); the so-called dead Nature is but an unripe Intelli-

* *System des transcendentalen Idealismus*, p. 7.

gence. The acme of its efforts—that is, for Nature completely to objectize itself—is attained through the highest and ultimate degree of reflection in Man—or what we call *Reason*. Here Nature returns into itself, and reveals its identity with that which in us is known as the Object and Subject.*

This function of Reason is elsewhere more distinctly described as the total *indifference-point* of the subjective and objective. The Absolute he represents by the symbol of the magnet. Thus, as it is the same principle which divides itself in the magnet into the north and south poles, the centre of which is the indifference-point, so in like manner does the Absolute divide itself into the Real and Ideal, and holds itself in this separation as absolute indifference.† And as in the magnet every point is itself a magnet, having a North pole, a South pole, and a point of indifference, so also in the Universe, the individual varieties are but varieties of the eternal One. Man is a microcosm.

Reason is the indifference-point. Whoso rises to it rises to the *reality* of things (*zum wahren Ansich*), which reality is precisely in the indifference of Object and Subject. The basis of Philosophy is therefore the basis of Reason; its knowledge is a knowledge of things as they are, i. e. as they are in Reason.‡

The spirit of Plotinus revives in these expressions. We have in them the whole key-stone of the Alexandrian School. The Intellectual Intuition by which we are to embrace the Absolute, is, as before remarked, but another form of the Alexandrian Ecstasy. Schelling was well aware that the Absolute, the Infinite as such, could not be known under the conditions of finity, cannot be known in personal consciousness. How, then, can it be known? By some higher faculty which discerns the identity of Object and Subject—which perceives the Absolute as Absolute, where all difference is lost in indifference.

* *System des transcendentalen Idealismus*, p. 5.

† Hence SCHELLING's philosophy is often styled the Indifference Philosophy.

‡ *Zeitschrift für speculative Physik*, vol. ii. heft 2.

There are three divisions in Schelling's system: the philosophy of Nature, the transcendental philosophy, and the philosophy of the Absolute.

His speculations with respect to Nature have met with considerable applause in Germany. Ingenious they certainly are, but vitiated in Method; incapable of verification. Those who are curious to see what he makes of Nature are referred to his *Zeitschrift für speculative Physik*, and his *Ideen zu einer Philosophie der Natur*. The following examples will serve to indicate the character of his speculations.*

Subject and Object being identical, the absolute Identity is the absolute totality named Universe. There can be no difference except a *quantitative* difference; and this is only conceivable with respect to individual existences. For the absolute Identity is *quantitative indifference* both of Object and Subject, and is only under this form. If we could behold all that is, and behold it in its totality, we should see a perfect quantitative equality. It is only in the scission of the Individual from the Infinite that quantitative difference takes place. This difference of Object and Subject is the ground of all finity: and, on the other hand, quantitative indifference of the two is Infinity.

That which determines any difference is a Power (*Potenz*), and the Absolute is the Identity of all Powers (*aller Potenzen*). All matter is originally liquid; *weight* is the power through which the Attractive and Expansive force, as the immanent ground of the reality of Matter, operates. Weight is the first *Potenz*. The second *Potenz* is Light—an inward intuition of Nature, as weight is the outward intuition. Identity with light is Transparency. Heat does not pertain to the nature of Light, but is simply a *modus existendi* of Light. Newton's speculations upon Light are treated with disdain, as a system built upon illogical conclusions, a system self-contradictory, and leading to infinite absurdities. Never-

* The reader must not complain if he do not understand what follows: intelligibility is not the characteristic of German speculation; and we are here only translating SCHELLING's words, without undertaking to enlighten their darkness.

theless this absurd system has led men to many discoveries: it is the basis of a gradually advancing science; while the views of Schelling lead to nothing except disputation. Thus, with regard to his explanation of Electricity: let us suppose it exact, and we must still acknowledge it to be useless. It admits of no verification; admits of no application. It is utterly sterile.

There are indeed general ideas in his *Natur-Philosophie*, which not only approach the conceptions of positive science, but have given a powerful stimulus to many scientific intellects. The general law of polarity, for example, which he makes* the law of universal nature, is seen illustrated in physics and chemistry; although the presumed relation between heat and oxygen, which he makes the basis of all atomic changes, no chemist will nowadays accept. When, in the second part of this treatise, he theorizes on organic life, the result is similar, namely some general ideas which seem luminous are enforced by particular ideas certainly false. He maintains that vegetation and life are the products of chemical action: the first consisting in a continual deoxidation, the second in a continual oxidation; as soon as this chemical action ceases, death supervenes, for living beings exist only in the moment of *becoming*.† He only expresses the universally accepted idea of life when he makes it depend on the incessant disturbance and re-establishment of an equilibrium,‡ or, as De Blainville defines it, 'a continual movement of decomposition and recomposition.'

All the functions of Life are but the individualizations of one common principle; and all the series of living beings are but the individualizations of one common Life: this is the *Weltseele*, or *anima mundi*. The same idea had been expressed by Goethe, and has since been presented under various forms by Oken and many German naturalists. The idea of a dynamic progression in Nature, is also the fundamental idea in Hegel's philosophy.

Schelling, in his *Jahrbücher der Medicin*, says that Science

* *Von der Weltseele*, 25 sq. † *Ibid.* p. 181. ‡ *Ibid.* p. 284.

is only valuable in as far as it is *speculative*; and by speculation he means the contemplation of God as He exists. Reason, inasmuch as it affirms God, cannot affirm anything else, and annihilates itself at the same time as an *individual* existence, as anything *out of* God. Thought (*das Denken*) is not my Thought; and Being is not my Being; for everything belongs to God or the All. There is no such thing as a Reason which *we have*; but only a Reason that *has us*. If nothing exists out of God, then must the knowledge of God be only the infinite knowledge which God has of himself in the eternal Self-affirmation. God is not the highest, but the only One. He is not to be viewed as the summit or the end, but as the centre, as the All in All. Consequently there is no such thing as a being lifted up to the knowledge of God; but the knowledge is *immediate* recognition.

If we divest Schelling's speculations of their dialectical forms, we shall arrive at the following results:—

Idealism is one-sided. Beside the Subject there must exist an Object: the two are identical in a third, which is the Absolute. This Absolute is neither Ideal nor Real—neither Mind nor Nature—but both. This Absolute is God. He is the All in All; the eternal source of all existence. He realizes himself under one form, as an objectivity; and under a second form as a subjectivity. He becomes conscious of himself in man: and this man, under the highest form of his existence, manifests Reason, and by this Reason God knows himself. Such are the conclusions to which Schelling's philosophy leads us. And now, we ask, in what does this philosophy differ from Spinozism?

The Absolute, which Schelling assumes as the indifference-point of Subject and Object, is but the *πρῶτον ἀγαθόν* and primal Nothing, which forms the first Hypostasis of the Alexandrian Trinity. The Absolute, as the Identity of Subject and Object, being neither and yet both, is but the Substance of Spinoza, whose attributes are Extension and Thought.

With Spinoza also he agreed in giving only a phenomenal

reality to the Object and Subject. With Spinoza he agreed in admitting but one existence—the Absolute.

But, although agreeing with Spinoza in his fundamental positions, he differed with him in Method, and in the applications of those positions. In both differences the superiority, as it seems to me, is incontestably due to Spinoza.

Spinoza deduced his system very logically from one fundamental assumption, viz. that whatever was true of ideas was true of objects. This assumption itself was not altogether arbitrary. It was grounded upon the principle of certitude, which Descartes had brought forward as the only principle which was irrefragable. Whatever was found to be distinct and *à priori* in Consciousness, was irresistibly true. Philosophy was therefore deductive; and Spinoza deduced his system from the principles laid down by Descartes.

Schelling's Method was very different. Aware that human knowledge was necessarily finite, he could not accept Spinoza's Method, because that would have given him only a knowledge of the finite, the conditioned; and such knowledge, it was admitted, led to scepticism. He was forced to assume another faculty of knowing the truth, and this was the Intellectual Intuition. Reason which could know the Absolute was only possible by transcending Consciousness and sinking into the Absolute. As Knowledge and Being were identical, to know the Infinite, we must *be* the Infinite, i.e. must lose our individuality in the universal.

Consciousness, then, which had for so long formed the basis of all Philosophy, was thrown over by Schelling, as incompetent to solve any of its problems. Consciousness was no ground of certitude. Reason was the organ of Philosophy, and Reason was *impersonal*. The Identity of Being and Knowing took the place of Consciousness, and became the basis of all speculation. We shall see to what it led in Hegel.

Our notice of Schelling has necessarily been brief, not because he merited no greater space, but because to have

entered into details with any satisfaction, would have carried us far beyond our limits. His works are not only numerous, but differ considerably in their views. All we have endeavoured to represent is the ideas which he produced as developments of Fichte, and which served Hegel as a basis.*

* A French translation of SCHELLING's most important work, under the title of *Système de l'Idéalisme transcendantal*, by P. GRIMLOT, the translator of FICHTE, has appeared; also a version of *Bruno; ou, Les Principes des Choses*. Nothing in English.

CHAPTER III.

HEGEL.

§ I. LIFE OF HEGEL.

GEORGE FREDERICK WILLIAM HEGEL was born at Stuttgart, the 27th of August, 1770. He received that classical education which distinguished the Wirtembergian students beyond all others; and in his eighteenth year he went to Tübingen, to pursue his theological and philosophical studies. He was there a fellow-student with Schelling, for whom he contracted great esteem. The two young thinkers communicated to each other their thoughts, and discussed their favourite systems. In after-life, when opposition had sundered these ties, Hegel never spoke of this part of their connection without emotion. In his twentieth year he had to give up all his plans for a professorship, and was content (hunger impelling) to accept the place of private tutor, first in Switzerland, and subsequently in Frankfort.

Early in 1801 his father died; and the small property he inherited enabled him to relinquish his tutorship and to move to Jena, where he published his dissertation *De Orbitis Planetarum*. This work was directed against the Newtonian system of Astronomy. It was an application of Schelling's Philosophy of Nature; and in it Newton was treated with that scorn which Hegel never failed to heap upon Empirics, i. e. those who trusted more to experience than to metaphysics. In the same year he published his *Difference between Fichte and Schelling*, in which he sided with the doctrines of his friend, whom he joined in editing the *Critical Journal of*

Philosophy. It is in the second volume of this Journal that we meet with his celebrated essay *Glauben und Wissen* (Faith and Knowledge), in which Kant, Jacobi, and Fichte are criticized.

At Jena he enjoyed the society of Goethe and Schiller. The former, with his usual sagacity, detected the philosophical genius which as yet lay undeveloped in Hegel; of which more may be read in Goethe and Schiller's *Correspondence*. Hegel, on the other hand, was to the last one of Goethe's staunchest admirers; and many a gleam of lustre is shed over the pages of the philosopher by the frequent quotations of the poet.

At the University of Jena, Hegel then held the post of *Privatdocent*; but his lectures had only four listeners. These four however were all remarkable men: Gabler, Troxler, Lachmann, and Zellmann. On Schelling's quitting Jena, Hegel filled his chair; but filled it only for one year. Here he published his *Phänomenologie des Geistes*. He finished writing this work on the night of the ever-memorable battle of Jena. While the artillery was roaring under the walls, the philosopher was deep in his work, unconscious of all that was going on. He continued writing, as Archimedes at the siege of Syracuse continued his scientific researches. The next morning, manuscript in hand, he steps into the streets, proceeding to his publisher's, firmly convinced that the interests of mankind are bound up with that mass of writing which he hugs so tenderly. The course of his reverie is somewhat violently interrupted; bearded and gesticulating French soldiers arrest the philosopher, and significantly enough inform him that, for the present, the interests of men lie elsewhere than in manuscripts. In spite of French soldiers, however, the work in due time saw the light, and was welcomed by the philosophical world as a new system—or rather as a new modification of Schelling's system. The editorship of the Bamberg newspaper was then offered him, and he quitted Jena. He did not long remain at Bamberg; for in the autumn of 1808 we find him Rector of the Gymnasium College at Nürnberg. He shortly after married

Fräulein von Tucher, with whom he passed a happy life: she bore him two sons. In 1816 he was called to the chair of Heidelberg, and published in 1817 his *Encyclopädie der philosophische Wissenschaften*, which contains an outline of his system. This work so exalted his reputation that in 1818 he was called to the chair of Berlin, then the most important in Germany. He there lectured for thirteen years, and formed a school, of which it is sufficient to name its members, Gans, Rosenkranz, Michelet, Werder, Marheinecke, and Hotho.

Hegel was seized with the cholera in 1831, and after a short illness expired, in the sixty-second year of his age, on the 24th of November, the anniversary of the death of Leibnitz.

§ II. HEGEL'S METHOD.

Schelling's doctrines were never systematically co-ordinated. He was subtle, ardent, and audacious; but he disregarded precision; and stood in striking contradiction to his predecessors Kant and Fichte in the absence of logical forms.

The effect of his teaching was felt more in the department of the philosophy of Nature than elsewhere. Crowds of disciples, some of them, as Oken and Steffens, illustrious disciples, attempted the application of his principles; and after a vast quantity of ingenious but sterile generalization, it was found that these principles led to no satisfactory conclusion.

Schelling's ideas were however very generally accepted in the philosophical world at the time Hegel appeared. These ideas were thought to be genuine intuitions of the truth; the only drawback was their want of systematic co-ordination. They were inspirations of the truth; and demonstrations were needed. The position Hegel was to occupy became therefore very clear. Either he must destroy those ideas and bring forward others; or he must accept them, and, in accepting, systematize them. This latter was no easy task, and this was the task he chose. In the course of his labours

he deviated somewhat from Schelling, because the rigorous conclusions of his logic made such deviations necessary; but these are, after all, nothing but modifications of Schelling's ideas; very often nothing but different expressions for the same ideas.

What then constitutes Hegel's glory? What is the nature of his contribution to philosophy, which has placed him on so high a pedestal of renown? It is nothing less than the invention of a new Method.*

The invention of a Method has always been considered the greatest effort of philosophical genius, and the most deserving of the historian's attention. A Method is a *path of transit*. Whoso discovers a path whereon mankind may travel in quest of truth, has done more towards the discovery of truth than thousands of men merely speculating. What had the observation and speculation of centuries done for astronomy before the right path was found? And if a Method could be found for Philosophy—if a path of transit from the phenomenal to the noumenal world could be found—should we not then be quickly in possession of the truth?

A Method is all-important. The one invented by Descartes seemed promising; but it led to Malebranche and Spinoza. The one invented by Locke had obvious excellencies; but it was a path of transit to Berkeley and Hume. That of Kant led to Fichte and Scepticism.

Curious to consider! In the modern as in the ancient world, the inevitable results of a philosophical Method are Idealism and Scepticism. One class of minds is led to Idealism or Mysticism; another class is led to Scepticism. But as both these conclusions are repugnant to the ordinary conclusions of mankind, they are rejected, and the Method which led to them is also rejected. A new one is found; hopes beat high; truth is about to be discovered; the search is active, and the result—always the same—repugnant

* This is the claim put up by his disciple MICHELET, *Gesch. der Systeme der Philos.* ii. 604-6; who declares HEGEL's method to be all that can properly be called his own. Comp. HEGEL's *Vermischte Schriften*, ii. 479.

Idealism or Scepticism. Thus struggling and baffled, hoping and dispirited, has Humanity for ever renewed the conflict, without once gaining a victory. Sisyphus rolls up the heavy stone, which no sooner reaches a certain point than down it rolls to the bottom, and all the labour is to begin again.

We have already traced the efforts of many noble minds; we have seen the stone laboriously rolled upwards, and seen it swiftly roll down again. We have seen Methods discovered; we have followed adventurous spirits as they rushed forward to conquest; and seen the discouragement, the despair which possessed them as they found their paths leading only to a yawning gulf of Scepticism, or a baseless cloud-land of Idealism. We have now to witness this spectacle once more. We have to see whither Hegel's Method can conduct us.

And what is this Method which Hegel discovered? Accepting as indisputable the identity of Object and Subject,* he was forced also to accept the position, that whatever was true of the thought was true of the thing. In other words, Mind and Matter being identical, Ideas and Objects were correlates, and equally true. This is the position upon which Descartes stood; the position upon which Spinoza stood. Schelling and Hegel arrived at this position by a different route, but they also took their stand upon it.

Now, it is evident that such a position is exposed to attacks on all sides; to none more so than to the contradictions which rise up from within it. If whatever is true of Ideas is true also of Objects, a thousand absurdities bristle up. Thus, as Kant said, there is considerable difference between *thinking* we possess a hundred dollars, and *possessing* them. Hegel's answer is delicious: he declares that 'Philosophy does not concern itself with such things as a hundred dollars!' (*daran ist philosophisch nichts zu erkennen*). Philosophy

* The fallacy is patent: Because the objective and subjective are identical in consciousness, because each act of the mind involves the two factors, the false conclusion is drawn that the two factors are one; but they are only one in consciousness, they are diverse in fact.

directs its thoughts only towards that which is necessary and eternal.

Very well: let such miserable illustrations as that of dollars be banished from discourse; let us concern ourselves only with what is necessary and eternal; let us confine ourselves to abstractions. Are there no contradictions here between Thoughts and Realities? For example, we have the Thought of Non-existence: does therefore this Non-existence which is in our Thought also possess an objective being? *Is there a Non-existence?*

We have chosen this idle question, because Hegel himself has forced us to it. He boldly says, that the Non-existence—the Nothing—*exists*, because it is a Thought (*das Nichts ist; denn es ist ein Gedanke*). It is not however merely a Thought, but it is the same Thought as that of pure Being (*Seyn*), viz. an entirely *unconditioned* Thought.

In this, coupled with his famous axiom, that 'Being and Non-Being are the same,' we have two of the curious results to which his Method led him. It was the Method of Descartes, founded upon the principle of the truth of *ideas* being equivalent to the truth of *things*; but inasmuch as this met with strong opposition from various sides, Hegel resolved to give it a deeper, firmer basis, a basis that went underneath these contradictions. The basis was his principle of the *identity of contradictories*.

Two contradictories are commonly supposed to exclude each other reciprocally: Existence excludes Non-Existence. This notion Hegel pronounces to be false. Everything is contradictory in itself; contradiction forms its essence: its identity consists in being the union of two contradictories. Thus Being (*Seyn*) considered absolutely—considered as unconditioned—that is to say, as Being in the abstract, apart from any individual thing, is the same as Nothing. Existence is therefore identical with its negation. But to conclude that there is not Existence, would be false: for the abstract Nothing (*Nichts*) is at the same time the abstract Being. We must therefore unite these two contraries, and in so

doing we arrive at a middle term—the realization* of the two in one, and this is *conditioned* Existence—it is the world.

Here is another example: in pure light,—that is, light without colour or shadow,—we should be totally unable to see anything. Absolute clearness is therefore identical with absolute obscurity—with its negation, in fact; but neither clearness nor obscurity are complete alone: by uniting them we have clearness mingled with obscurity; that is to say, we have Light properly so called.

Hegel thus seized the bull by the horns. Instead of allowing himself to be worsted by the arguments derived from the contradictions to which the identity of Existence and Knowledge was exposed, he at once met the difficulty by declaring that the identity of contraries was the very condition of all existence; without a contrary nothing could come into being. This was logical audacity which astounded his countrymen, and they have proclaimed this feat worthy of immortal glory. A new light seemed to be thrown upon the world: a new aspect was given to all existences. Being was at the same time Non-Being; Subject was at the same time Object; and Object was Subject: Force was at the same time Impotence; Light was also Darkness, and Darkness was also Light.

Nothing in this world is single;
All things, by a law divine,
In one another's being mingle.

The merit of this discovery, whatever may be its value, is considerably diminished when we remember how distinctly it was enunciated in ancient Greece. Heraclitus had told us how 'All is, and is not; for though it comes into being, yet it forthwith ceases to be.' Empedocles had told us how there was 'Nothing but a mingling and then a separation of the mingled.' Indeed the constant flux and reflux of life, the many changes, and the compound nature of all things, must early have led men to such a view. Hegel himself admits

* The original word is *werden*—the *becoming*. It is much used in German speculation to express the transition from Non-being to Being.

that all the positions maintained by Heraclitus have been by him developed in his Logic. What then was wanting to Heraclitus—what is the great merit of Hegel? A perception of the logical law of the identity of contradictories. To this Hegel has the sole claim.

Here, then, is the foundation-stone of Hegel's system. He adopts the principle of the identity of Subject and Object. To those who assert that this principle is false, because it leads to manifest contradictions, Hegel replies that the principle is true; and that it *must* lead to contradictions, because the identity of contradictories is the condition of all existence.

Want of space, and a conviction of the essential worthlessness of Hegel's system, forbid my entering into any discussion of the various positions; but respecting this fundamental position of *Seyn* and *Nicht-Seyn* as identical, it may be worth while to point out the fallacy on which it rests. Being and Non-Being are identical only in the single respect of being both *indeterminate*; they have the identity which consists in equal freedom from predicable attributes; but as Objects, i.e. as existences, or thoughts, they are not identical, but opposite. Hegel might as well argue that Russians and Hottentots were identical, because they were both not English.

Such is the Method which admiring disciples extol as the greatest effort of Philosophy, as the crown of all previous speculations; and which even in France has been in some quarters accepted as a revelation.

The *law* being given, we may now give the *process*. Let us take any one Idea (and with Hegel an Idea is a reality, an Object, not simply a modification of the Subject); this Idea by its inherent activity tends to develop that which is within it. This development operates a division of the Idea into two parts—a positive and a negative. Instead of one Idea we have therefore two, which reciprocally exclude each other. The Idea therefore, by the very act of development, only conduces to its own negation. But the *process* does not stop

there. The negation itself must be negated. By this negation of its negation, the Idea returns to its primitive force. But it is no longer the same. It has developed all that it contained. It has absorbed its contrary. Thus the negation of the negation, by *suppressing* the negation, at the same time *preserves* it.*

We may, by way of anticipation, observe that Hegel's notion of God becoming conscious of Himself in Philosophy, and thereby attaining his highest development, is founded on the above process. God as pure Being can only pass into reality through a negation; in Philosophy he *negatives this negation*, and thus becomes a *positive* affirmation.

§ III. ABSOLUTE IDEALISM.

We have seen Hegel's Method. Whether that be a path of transit to the domain of truth, or only to the cloudland of mysticism and the bogs of absurdity, our readers will very soon decide. Meanwhile we must further detail Hegel's opinions; we must see whither his Method did lead him.

As everything contains within itself a contradiction, and as the identity of the two constitutes its essence, so we may say that Schelling's conception of the identity of Subject and Object was not altogether exact. He assumed the reality of both of these *poles* of the magnet; and the identity he called the point of indifference between them. These two extremities were always separate, though identified. Hegel declared that the essence of all relation—that which is true and positive in every relation—is not the *two terms related*, but the *relation itself*. This is the basis of Absolute Idealism.

It may be thus illustrated: I see a tree. Certain psychologists tell me that there are three things implied in this one fact of vision, viz. a tree, an image of that tree, and a mind which apprehends that image. Fichte tells me that it is I alone who exist: the tree and the image of the tree are but

* This play upon words is assisted by the German *aufheben*, which means 'to suppress' as well as 'to preserve.' See OTT, *Hegel et la Philos. Allemande*, p. 80.

one thing, and that is a modification of my mind. This is *Subjective Idealism*. Schelling tells me that both the tree and my Ego are existences equally real or ideal, but they are nothing less than manifestations of the Absolute. This is *Objective Idealism*. But, according to Hegel, all these explanations are false. The only thing really existing (in this one fact of vision) is the Idea—the relation. The Ego and the Tree are but two terms of the relation, and owe their reality to it. This is *Absolute Idealism*.

Of the three forms of Idealism this is surely the most preposterous; and that any sane man—not to speak of a man so eminent as Hegel—should for an instant believe in the correctness of the logic which ‘brought him to this pass,’—that he should not at once reject the premisses from which such conclusions followed,—must ever remain a wonder to all sober thinkers,—must ever remain a striking illustration of the unbounded confidence in bad logic which distinguishes Metaphysicians, a race mad with logic, and feeding its mind with chimeras.

‘Gens ratione ferox, et mentem pasta chimæris.’

What does this Absolute Idealism bring us to? It brings us to a world of mere ‘relations.’ The Spinozistic notion of ‘Substance’ was too gross. To speak of Substance, was to speak only of one term of a relation. The Universe is but the Universe of Ideas, which are at once both objective and subjective, their essence consisting in the relation they bear to each other, in the identity of their contradiction.

Remark also that this Absolute Idealism is nothing but Hume’s Scepticism, in a dogmatical form. Hume denied the existence of Mind and Matter, and said there was nothing but Ideas. Hegel denies the existence of both Object and Subject, and says there is nothing but the ‘relations’ of the two. He blames Kant for having spoken of Things as if they were only appearances to us (*Erscheinungen für uns*) while their real nature (*Ansich*) was inaccessible. The real relation, he says, is this: that the Things we know are not only appearances

to us, but are in themselves mere appearances (*sondern an sich bloss Erscheinungen*). The real objectivity is this: that our Thoughts are not only Thoughts, but at the same time are the reality of Things.*

This is *the* Philosophy—not *a* Philosophy, remember—not a system which may take its place amongst other systems. No, it is the Philosophy *par excellence*. We have Hegel’s word for it;† we have the confirmation of that word by many ardent disciples. True it is, that some of the young Hegelians, when reproached with the constant changes they introduce, reply that it belongs to the nature of Philosophy to change. But these are inconsiderate, rash young men. Mature and sober thinkers (of Hegel’s school) declare that, although some improvements are possible in detail, yet on the whole Hegel has given *the* Philosophy to the world.

And this philosophy is not a system of doctrines whereby man is to guide himself. It is something far greater. It is the contemplation of the self-development of the Absolute. Hegel congratulates mankind upon the fact of a new epoch having dawned. ‘It appears,’ says he, ‘that the World-Spirit (*Weltgeist*) has at last succeeded in freeing himself from all encumbrances, and is able to *conceive himself as Absolute Intelligence* (*sich als absoluten Geist zu erfassen*). . . . For he is this only in as far as he knows himself to be the Absolute intelligence: *and this he knows only in Science; and this knowledge alone constitutes his true existence.*’‡

Such pretensions would be laughable, were they not so painful to contemplate. To think not only of one man, and that one remarkable for the subtlety of his intellect, a subtlety which was its bane, together with many other men—some hundred or so, all rising above the ordinary level of ability—one and all cultivating as the occupation of their lives a science with such pretensions, and with such a Method

* ‘Dass die Gedanken nicht bloss unsere Gedanken, sondern zugleich das Ansich der Dinge und des Gegenständlichen überhaupt sind.’—*Encyclopädie*, p. 89; see also p. 97. The whole of this Introduction to the *Encyclopädie* is worth consulting.

† *Gesch. der Philos.* iii. 690.

‡ *Ibid.* iii. 689.

as that of the identity of contradictories! The delusions daily to be seen are those of ignorance, and only depend upon ignorance. But the delusions of Metaphysics are the delusions of an ambitious intelligence which 'o'er-leaps itself.' Men such as Fichte, Schelling, and Hegel, for example, belong incontestably to a high order of intelligences; yet we have seen to what their reasonings brought them; we have seen what absurdities they could accept, believing they had found the truth. Hegel especially impresses you with a sense of his wonderful power. His works I have always found very suggestive and very exasperating; his ideas, repugnant to what I regard as the truth, are yet so coherent, so systematically developed, so obviously coming from matured meditation, that I have always risen from the perusal with a sense of the author's greatness, and deep regret at such a waste of power. His *Lectures on Æsthetics*, his *History of Philosophy*, his *Philosophy of History*, and his *Philosophy of Religion*, are especially worthy of an attentive study.

As for the system itself, we may leave to all readers to decide whether it be worthy of any attention, except as an illustration of the devious errors of speculation. A system which begins with assuming that Being and Non-Being are the same, because Being in the abstract must be conceived as the Unconditioned, and so must Non-Being, therefore both, as unconditioned, are the same; a system which proceeds upon the identity of contradictories as the method of Philosophy; a system in which the only real positive existence is that of simple Relation, the two terms of which are Mind and Matter; this system, were it wholly true, leaves all the questions for which science is useful just as much in the dark as ever, and is therefore unworthy the attention of earnest men working for the benefit of mankind.

The futility may be estimated by a glance at the solutions of soluble problems which it offers. Nothing can exceed the ingenuity of nonsense exhibited by Hegel when he treats of questions which, as coming within the range of Verification, should, if his system were true, present the most convincing

evidence of its truth. He might ridicule Newton and the empirical school to his heart's content, did he not exhibit the ridiculous spectacle of his own hopeless failure to solve the problems approximately solved by Newton and the empirics. Surely a system which has disclosed the highest truths, ought to have some illumination for the lower truths? A man who has sounded the depths of Being, ought to be able to state some of the simple laws of Phenomena? A man who can follow the development of the Cosmos, ought to have some insight into cosmical laws? But what is the fact in Hegel's case? He has not only failed to discover a single law or to establish a single induction in the region of natural phenomena, but has vehemently opposed some of the best established inductions of previous thinkers. In Astronomy, Physics, Chemistry, Biology, Psychology—though all these subjects have been treated by him—his system is utterly useless.

Not only is it useless; it is worse, it is pernicious. The facility with which men can throw all questions into systematic obscurity by the aid of Metaphysics, has long been the bane of Germany. In England and France we have been saved from perpetuating the frivolous discussions of the Schoolmen, mainly because we have retained their nomenclature and terminology, and are warned by these from off scholastic ground; but the Germans, having invented a new philosophical language, do not perceive that the new terms disguise old errors: they fail to recognise in *Irrlicht* the familiar face of *Ignis fatuus*.

§ IV. HEGEL'S LOGIC.

Philosophy being the contemplation of the self-development of the Absolute, or, as Hegel sometimes calls it, the representation of the Idea (*Darstellung der Idee*), it first must be settled in what directions this development takes place.

The process is this. Everything must be first considered *per se* (*an sich*); next in its negation, as some *other* thing

(*Andersseyn*). These are the two terms—the contradictories; but they must be identified in some third, or they cannot exist; this third is the Relation of the two (the *Anundfür-sichseyn*). This is the affirmation which is founded on the negation of a negation: it is therefore positive, real.

The Absolute, which is both Thought and Being, must be considered in this triple order, and Philosophy falls into three parts:—

I. LOGIC, the science of the *Idee* * *an und für sich*.

II. NATURE-PHILOSOPHY as the science of the *Idee* in its *Andersseyn*.

III. PHILOSOPHY OF INTELLIGENCE, as the *Idee* which has returned from its *Andersseyn* to itself.

Logic, in this system, has a very different meaning from that usually given to the word. It is, indeed, equally with the common logic, an examination of the forms of Thought; but it is more:—it is an examination of Things, no less than of Thoughts. As Object and Subject are declared identical, and whatever is true of the Thought is equally true of the Thing, since the Thought is the thing, Logic, of course, takes the place of the ancient Logic and, at the same time, of Metaphysics. It is the generation of all abstract ideas. Consequently it contains the whole system of Science; and the other parts are but the application of this Logic.

Hegel's *Logic* is contained in three stout volumes of dry hard scholasticism. It is a representation of the *Idee*, in its process of pure thought, free from all contact with objects. It is wholly abstract. It begins with pure Being. This pure Being, in virtue of its purity, is *unconditioned*; but that which has no conditions has no existence: it is a pure abstraction. Now a pure abstraction is also the *Nothing* (*das Nichts*): it also has no conditions: its unconditionality makes its nothingness. The first proposition in Logic is, therefore, 'Being and Non-Being are the same.'

* The *Idee* is but another term for the Absolute. We shall use it, rather than Idea, because the English word cannot be employed without creating unnecessary confusion.

Hegel admits the proposition to be somewhat paradoxical, and is fully aware of its openness to ridicule; but he is not a man to be scared by a paradox, to be shaken by a sarcasm. He is aware that stupid common-sense will ask, 'whether it is the same if my house, my property, the air I breathe, this town, sun, the law, mind, or God, exist or not.' Certainly, a very pertinent question: how does he answer it? 'In such examples,' he says, 'particular ends—utility, for instance—are understood, and then it is asked if it is indifferent to me whether these useful things exist or not? But, in truth, Philosophy is precisely the doctrine which is to free man from innumerable finite aims and ends, and to make him so indifferent to them that it is really all the same whether such things exist or not.' Here we trace the Alexandrian influence;—except that Plotinus would never have had the audacity to say that Philosophy was to make us indifferent to whether God existed or not; and it must have been a slip of the pen which made Hegel include God in the examples: a slip of the pen, or else the 'rigour of his pitiless logic,' of which his disciples talk.

Remark, also, the evasive nature of his reply. Common sense suggests to him a plain direct question, not without interest. This question, plain as it is, goes to the bottom of his system. He evades it by answering, that Philosophy has nothing to do with the interests of men. Very true; his system *has* nothing to do with them. But the question put was not, 'Has Philosophy to concern itself with the interests of mankind?' The question put was, 'If, as you say, Being and Non-Being are the same, is it the same thing to have a house and not to have it?' Hegel might have given a better answer even upon his own principles.

To return however. The first proposition has given us the two contradictories; there must be an identity—a relation—to give them positive reality. As pure Being, and as pure Non-Being, they have no reality; they are mere potentialities. Unite them, and you have the *Becoming* (*Werden*), and that is reality. Analyse this idea of Becoming, and you will find

that it contains precisely these two elements,—a Non-Being from which it is evolving, and a Being which is evolved.

Now these two elements, which reciprocally contradict each other, which incessantly tend to absorb each other, are only maintained in their reality by means of the relation in which they are to each other;—that is the point of the magnet which keeps the poles asunder, and by keeping them asunder prevents their annihilating each other. The Becoming is the first concrete Thought we can have, the first conception; Being and Non-Being are pure abstractions.

A question naturally suggests itself as to how Being and Non-Being pass from Abstractions into Realities. The only answer Hegel gives us is that they *become* Realities; but this is answering us with the very question itself. We want to know *how* they become. In themselves, as pure Abstractions, they have no reality; and although two negatives make an affirmative in language, it is not so evident how they can accomplish this in fact. The question is of course insoluble; and those Hegelians whom I questioned on the point unanimously declared it to be one of those truths (very numerous in their system) which can be comprehended, but not proved.

Let us grant the Becoming. It is the identity of Being and Non-Being; and as such it is Being as *determined*, conditioned. All determination (*Bestimmung*) is Negation.* Therefore, in order that Being should become, it must suffer first a negation; the *Ansichsein* must also be *Andersein*, and the relation of the two is total reality, the *Anundfürsichsein*.

Quality is the first negation: it is the reality of a thing. That which constitutes Quality is the negation which is the condition of its Being. Blue, for example, is blue only because it is the negation of red, green, purple, &c.; a meadow is a meadow only because it is not a vineyard, a park, a ploughed field, etc.

Being, having suffered a Negation, is determined as Quality

* This, as many other ideas, is borrowed from SPINOZA, in whose system it has real significance. In HEGEL's it is a mere play upon words.

—it is Something, and no longer an Abstraction. But this something is limited by its very condition; and this limit, this negation, is external to it: hence Something implies Some-other-thing. There is a *This* and a *That*. Now the Something and the Some-other-thing, the *This* and the *That*, are the *same* thing. *This* is a tree; *That* is a house. If I go to the house, it will then be the *This*, and the tree will be *That*. Let the tree be the Something, and the house the Some-other-thing, and the same change of terms may take place. This proves that the two are identical. The Something carries its opposite (other-thing) within itself; it is constantly becoming the other-thing. Clearly showing that the only positive reality is the *Relation* which always subsists throughout the changes of the terms.

This, it must be owned, looks like the insanity of Logic. It is not however unexampled in Hegel's works. In his *Phänomenologie des Geistes*, he tells us that perception gives us the ideas of Now, Here, This, &c. And what is the Now? At noon I say, '*Now* it is day.' Twelve hours afterwards I say, '*Now* it is night.' My first affirmation is therefore false as to the second, my second false as to the first: which proves that the *Now* is a general idea; and as such a real existence, independent of all particular *Nows*.

Our readers are by this time probably quite weary of this frivolous Logic; we shall spare them any further details. If they wish further to learn about Quantities, Identities, Diversities, etc., they must consult the original.

Those who are utter strangers to German speculation will wonder, perhaps, how it is possible for such verbal quibbles to be accepted as Philosophy. But, in the first place, Philosophy itself, in all its highest speculations, is but a more or less ingenious playing upon words. From Thales to Hegel, verbal distinctions have always formed the ground of Philosophy, and must ever do so as long as we attempt to penetrate the essence of things. In the second place, Hegel's *Logic* is a work requiring prodigious effort of thought to understand: so difficult and ambiguous is the language,

and so obscure the meaning. Now, when a man has once made this effort, and succeeded, he is very apt to over-value the result of all that labour, and to believe what he has found, to be a genuine truth. Thirdly, Hegel is very consistent; consistent in audacity, in absurdity. If the student yields assent to the premises, he is sure to be dragged irresistibly to the conclusions. Fourthly, the reader must not suppose that the absurdities of Hegel's system are so apparent in his works as in our exposition. We have exerted ourselves to the utmost to preserve the real significance of his speculations; but we have also endeavoured to bring them into the clear light of day. Anything except a *verbal* translation would reveal some aspects of the absurdity, by the very fact of bringing it out of the obscurity with which the German terminology veils it. The mountain looming through a fog turns out to be a miserable hut, as soon as the fog is scattered; and so the system of Absolute Idealism is seen to be only a play upon words, as soon as it is dragged from out the misty terminology in which it is enshrouded.

§ V. APPLICATION OF THE METHOD TO NATURE AND HISTORY, RELIGION AND PHILOSOPHY.

Having exhibited the various evolutions of the *Idee* as pure Thought, Hegel undertakes to exhibit its objective evolutions in the domain of Nature.

In the former attempt he had only to deal with abstractions; and it was no difficult matter to exhibit the 'genesis of ideas'—the dependence of one formula upon another. Verbal distinctions were sufficient there. But verbal distinctions, audacious logic, and obscure terminology avail nothing in attacking the problems presented to us by Nature; and in endeavouring to give scientific solutions, Nature is not to be coerced. Aware of the difficulties—seeing instinctively that the varieties of Nature could not be reduced to the same simplicity as the varieties of the *Idee*—as

Thought had been reduced in his *Logic*—Hegel asserted that the determinations of the *Idee* in its *exteriority* could not follow the same march as the determinations of the *Idee* as Thought. Instead of generating each other reciprocally, as in the *Logic*, these determinations in Nature have no other connection than that of co-existence; sometimes indeed they appear isolated.

When we look abroad upon Nature, we observe an endless variety of transformations. At first these seem without order; on looking deeper, we find that there is a regular series of development from the lowest to the highest. These transformations are the struggles of the *Idee* to manifest itself *objectively*. Nature is a dumb Intelligence striving to articulate. At first she mumbles; with succeeding efforts she articulates; at last she speaks.

Every modification which the *Idee* undergoes in the sphere of pure Thought it endeavours to express in the sphere of Nature. And thus an object is elevated in the scale of creation in so far as it resumes within itself a greater number of qualities: inorganic matter is succeeded by organic, and amongst organised beings there is a graduated scale from the plant up to man. In man the *Idee* assumes its highest grade. In Reason it becomes conscious of itself, and thereby attains real and positive existence—the highest point of development. Nature is divine in principle (*an sich*), but we must not suppose it divine *as it exists*. By the Pantheists Nature is made one with God, and God one with Nature. In truth, Nature is but the exteriority (*Aeusserlichkeit*) of God: it is the passage of the *Idee* through imperfection (*Abfall der Idee*). Observe moreover that Nature is not only external in relation to the *Idee*, and to the subjective existence of the *Idee*, namely Intelligence; but exteriority constitutes the condition in virtue of which Nature is Nature (*sondern die Aeusserlichkeit macht die Bestimmung aus, in welcher sie als Natur ist*).

The Philosophy of Nature is divided into three sections—Mechanics, Physics, and Physiology. Into the details, we

are happy to say, our plan forbids us to enter; or we should have many striking illustrations of the futility of that Method which pretends to construct the scheme of the world *à priori*. Experimental philosophers—Newton especially—are treated with consistent contempt. Hegel is not a timid speculator; he recoils from no consequence; he bows down to no name; he is impressed by no fact, however great. That Newton's speculations should be no better than drivel, and his 'discoveries' no better than illusions, were natural consequences of Hegel's fundamental theories. That all Europe had been steadily persevering in applying Newton's principles, and extending his discoveries,—that Science was making gigantic strides, hourly improving man's mastery over Nature, hourly improving the condition of mankind,—this fact, however great it might appear to others, when coupled with the other fact, that upon the ontological Method no discoveries had yet been made, and none seemed likely to be made—appeared to Hegel as unworthy of a philosopher's notice. The interests of mankind were vulgar considerations, for which there would always be abundant vulgar minds. The philosopher had other objects.

The third and last part of Hegel's system is the Philosophy of Intelligence. Therein the *Idee* returns from Nature to itself, and returns through a consciousness of itself.

Subjectively, the *Idee* first manifests itself as a Soul; it then returns upon itself, and becomes Consciousness; and finally renders itself an Object to itself, and then it is Reason.

Objectively the *Idee* manifests itself as Will, and realises itself in History and in Law.

The Subjective and Objective manifestations being thus marked out, we have now to see in what manner the identity of the two will manifest itself. The identity of the Objective and Subjective is the *Idee*, as Intelligence, having consciousness of itself in individuals, and realising itself as Art, as Religion, and as Philosophy.

The 'Lectures on the Philosophy of History,'* edited by the late accomplished Professor Gans, is one of the pleasantest books on the subject we ever read. The following ideas will be sufficient to give an indication of its method.

History is the development of the *Idee* objectively—the process by which it attains to a consciousness of itself by explaining itself.† The condition of Intelligence is to know itself; but it can know itself only after having passed through the three phases of the method, namely, affirmation, negation, and negation of negation, as the return to consciousness endowed with reality. It is owing to these phases that the human race is perfectible.

States, Nations, and Individuals represent the determinate moments of this development. Each of these moments manifests itself in the constitution, in the manners, in the creeds, in the whole social state of any one nation. For this nation it is what we call the spirit of the age: it is the only possible truth, and by its light all things are seen. But with reference to the absolute *Idee*, all these particular manifestations are nothing but *moments* of transition—instruments by which the transition to another higher moment is prepared. Great men are the incarnations of the spirit of the age.

It is not every nation that constitutes itself into a state: to do that, it must pass from a family to a horde, from a horde to a tribe, and from a tribe to a state. This is the formal realisation of the *Idee*.

But the *Idee* must have a theatre on which to develop itself. The Earth is that theatre; and as *it* is the product of the *Idee* (according to the *Naturphilosophie*), we have the curious phenomenon of an actor playing upon a stage—that stage being himself! But the Earth, as the geographical basis of History, has three great divisions:—1. The moun-

* *Werke*, vol. ix.

† History is a sort of Theodicea; the merit of originality, however, which HEGEL claims (*Einleitung*, p. 20), is due to Vico, from whom he has largely borrowed; Vico expressly calls his *New Science* a *Civil Theology of Divine Providence*. See *La Science Nouvelle*, livre i. ch. iv.

tainous regions. 2. The plains and valleys. 3. The coasts and mouths of rivers. The first represents the primitive condition of mankind; the second the more advanced condition, when society begins to be formed; the third, when, by means of river-communication, the activity of the human race is allowed free development in all directions, particularly of commerce. This is another of the ideas of Vico,* and is in contradiction to all history.

The great *moments* of History are four. 1. In the *East* we have the predominance of substantiality: the *Idee* does not know its freedom. The rights of men are unknown because the East knows only that *one* is free. This is the *childhood* of the World. 2. In Greece we have the predominance of individuality. The *Idee* knows that it is free, but only under certain forms, that is to say, only *some* are free. Mind is still mixed with Matter and finds its expression therein; this expression is Beauty. This is the *youthhood* of the World. 3. In Rome we have opposition between the Objective and Subjective: the political universality and individual freedom both developed yet not united. This is the *manhood* of the world. 4. In the Teutonic Nations we have the unity of the contradiction—the *Idee* knowing itself; and instead of supposing like Greece and Rome that *some* only are free, it knows that *all* men are free. This is the *old-age* of the world; but although the old-age of body is weakness, the old-age of Mind is ripeness. The first form of government which we see in History is Despotism; the second is Democracy and Aristocracy; the third is Monarchy.†

On reading this meagre analysis, the ingenious speculations of the original will scarcely be recognised. Such is the art with which Hegel clothes his ideas in the garb of Philosophy, that we, though aware that he is writing fiction, not history, and giving us perversions of notorious facts as the laws of historical development;—telling us that the Spirit of the World manifests himself under such and such phases,

* *La Science Nouvelle*, livre i. ch. ii. § 97.

† *Philosophie der Geschichte*, p. 128.

when it is apparent to all that, granting the theory of this World-spirit's development, the phases were *not* such as Hegel declares them to have been;—although we are aware of all this, yet is the book so ingenious that it seems almost unfair to reduce it to such a *caput mortuum* as our analysis. Nevertheless the principles of his philosophy of History are those we have given above. The application of those principles to the explication of the various events of History is still more ingenious.

Hegel's *Philosophy of Religion* has in the last few years been the subject of bitter disputes. The schisms of the young Hegelians—the doctrine of Strauss, Feuerbach, Bruno Bauer, and others—being all deduced, or pretended to be deduced, from Hegel's system, much angry discussion has taken place as to the real significance of that system. When doctors thus disagree we shall not presume to decide. We will leave the matter to theologians; and for the present only notice Hegel's fundamental ideas.

It is often a matter of wonder to see how Hegel's Method is applied to all subjects, and how his theory of life can be brought to explain every product of life. This is doubtless a great logical merit; and it inspires disciples with boundless confidence. Few, however, we suspect, have approached the subject of Religion without some misgivings as to the applicability of the Method to explain it. Probably the triumph is great when the applicability is shown to be as perfect here as elsewhere. Of this our readers shall judge.

Hegel of course accepts the Trinity; his whole system is Trinitarian. God the Father is the eternal *Idee an und für sich*: that is to say, the *Idee* as an *unconditioned* Abstraction. God the Son, *engendered* by the Father, is the *Idee* as *Anderssein*: that is to say, as a *conditioned* Reality. The *separation* has taken place which, by means of a *negation*, gives the Abstraction real existence. God the Holy Ghost is the Identity of the two; the *negation of the negation* and perfect totality of existence. He is the Consciousness of himself as Spirit: this is the condition of his existence.

God the Father was before the World, and created it. That is to say, he existed *an sich*, as the pure *Idee*, before he assumed any reality. He created the World, because it is the essence of his being to create (*es gehört zu seinem Sein, Wesen, Schöpfer zu sein*). Did he not create, then would his own existence be incomplete.

The vulgar notion of theologians is that God created the world by an act; but Hegel says that the creation is not an act, but an eternal moment,—not a thing *done*, but a thing perpetually *doing*;—God did not *create* the world, he is eternally *creating* it. Attached also to this vulgar notion, is another less precisely but more commonly entertained; namely, that God, having created the world by an act of his will, lets it develope itself with no interference of his; as Goethe somewhere ridicules it, he ‘sits aloft seeing the world go.’ This was not the doctrine of St. Paul, whose pregnant words are, ‘*In him* we live, and move, and have our being.’ We live *in* God, not out of him, not simply by him. And this is what Hegel means when he denies that the creation was a single act. Creation was, and is, and ever will be. Creation is the reality of God: it is God passing into activity, but neither suspended nor exhausted in the act.

This is all that we can here give of his *Philosophy of Religion*; were we to venture further, we should only get ourselves entangled in the thorny labyrinth of theological problems. Let us pass therefore to his *History of Philosophy*, which, according to him, is the history of the development of the *Idee* as intelligence. This development of thought is nothing more than the various transitions which constitute the *moments* of the absolute Method. All these *moments* are represented in history; so that the *History of Philosophy* is the reproduction of the *Logic* under the forms of intelligence. The succession of these moments gives to each period a particular philosophy; but these various philosophies are, in truth, only parts of the one philosophy. This looks like the Eclecticism of Victor Cousin; and indeed Cousin’s system is but an awkward imitation of Hegel: but the Frenchman has either misunderstood, or has modified, the views of his master.

Historically speaking, there have been, according to Hegel, but two philosophies—that of Greece and that of Germany. The Greeks conceived Thought under the form of the *Idee*; the moderns have conceived it under the form of *Spirit*. The Greeks of Alexandria arrived at unity; but their unity was only ideal, it existed objectively in thought. The subjective aspect was wanting: the totality knew itself not as subjective and objective. This is the triumph of modern philosophy.

The *moments* have been briefly these:—1. With Thales and the Eleatics, the *Idee* was conceived as pure Being: the One. 2. With Plato it was conceived as Universal, Essence, Thought. 3. With Aristotle as Conception (*Begriff*). 4. With the Stoics, Epicureans, and Sceptics, as subjective Conception. 5. With the Alexandrians as the totality of Thought. 6. With Descartes as the Self-Consciousness. 7. With Fichte as the Absolute, or *Ego*. 8. With Schelling as the Identity of Subject and Object.

We close here our exposition of Hegel’s tenets; an exposition which we have been forced to give more in his own words than we could have wished; but the plan we adopted with respect to Kant and Fichte would not have been so easy (we doubt if it be possible) with respect to Hegel, whose language *must* be learned, for the majority of his distinctions are only verbal. In Kant and Fichte the thoughts had to be grappled with; in Hegel the form is everything.

We have only touched upon essential points. Those desirous of more intimate acquaintance with the system are referred to the admirable edition of his complete works, published by his disciples, in twelve volumes, octavo. If this voluminousness be somewhat too alarming, we can recommend the abridgment by Franz and Hillert,* where the whole system is given in Hegel’s own words, and only his illustrations and minute details are omitted. Michelet’s work indicates the various directions taken by Hegel’s disciples.† Chalybäus is popular, but touches only on a

* HEGEL’S *Philosophie in wörtlichen Auszügen*, Berlin, 1843.

† MICHELET: *Geschichte der letzten Systeme der Philosophie in Deutschland*, 2 vols. 1837.

few points.* Barchou de Penhoen evidently knows Hegel only at second-hand, and is not to be trusted.† Dr. Ott's work‡ is ill-written, but is very useful as an introduction to the study of the works themselves. No work of Hegel's has been translated into English;§ and only his *Aesthetik* into French, and that is more an analysis, we believe, than a translation.

* CHALYBÄUS: *Historische Entwicklung der speculativen Philosophie von Kant bis Hegel*, 3. Aufl. 1843.

† BARCHOU DE PENHOEN: *Histoire de la Philosophie allemande*, 2 vols. 1836.

‡ OTT: *Hegel et la Philosophie allemande*, 1844. The best work on German Philosophy known to me is WILM's *Histoire de la Philosophie allemande*, 4 vols. 1846-9.

§ Since this was written, a part of the *Logic* has appeared under this title, — *The Subjective Logic of Hegel*, translated by H. SLOMAN and J. WALLON, 1855, and Mr. SIBREE has admirably rendered the *Philosophy of History*. An attempt to introduce HEGEL to the English public has been made in Mr. J. H. STIRLING's *Secret of Hegel*, 2 vols. 1865, which contains a translation of the chief parts of the *Logic*, with a commentary.

ELEVENTH EPOCH.

Foundation of the Positive Philosophy.

CHAPTER I.

AUGUSTE COMTE.*

§ 1. HIS LIFE.

AUGUSTE COMTE was born at Montpellier on the 19th of January, 1798, in a modest house still to be seen facing the church of St. Eulalie. His father was treasurer of taxes for the department of Hérault. Both father and mother were strict Catholics and ardent royalists; but any influence they may have exercised over the direction of their son's thoughts was considerably neutralised by his own insurgent disposition on the one hand, and by his early education on the other. He was not docile to authority; though in after life he strenuously preached the virtue of docility. At the age of nine he became a boarder in the Montpellier Lycée; and there quickly distinguished himself by his ardour in study and by his resistance to discipline. Small and delicate in frame, loved by his comrades although he seldom joined in their sports, full of veneration for his professors, he was intractable, tiresome, and argumentative with his masters; those who could teach him found him docile; those who had to restrain him found him rebellious. His professors praised, his masters punished him.

* The sources of this biographical sketch have been LITTRÉ: *Auguste Comte et la Philosophie Positive*, 1863; ROBINET: *Notice sur l'Œuvre et sur la Vie d'Auguste Comte*, 1860; and personal knowledge.

At the age of twelve he had learned all that the Lycée prescribed in the way of instruction, and the Director begged that he might be permitted to begin mathematics. Consent was given; and the result may be told in one significant sentence: in four years he had gained a first place at the École Polytechnique, although the rules of that institution did not then allow of his admission, because he was still under age. He had to wait a whole year before the doors were opened to him; and in that year he displayed his acquirements by taking the place of his old professor (who was in failing health), and giving a course of mathematics to his former comrades, and some of his former masters.

At the age of seventeen he was admitted to the École Polytechnique, and there he was brought in contact with republican sentiments and scientific tendencies eminently suited to his rebellious and inquiring disposition. By the time he was fourteen he is supposed to have entirely disengaged himself from all royalist and all theological opinions; and he was occupied with the writings which in the eighteenth century discussed the fundamental axioms of social, ethical, and religious systems. He began seriously to meditate on the revolutions of modern history. His comrades respected and admired him. His professors recognised his eminent capacity. A brilliant career seemed certain, when it was arrested by a characteristic action of his own. One of the masters had insulted the younger students by his manners; the elder students took up the case, and after mature deliberation decided that the master was unworthy of continuing in his office. They drew up the following notification:—‘Monsieur, quoiqu’il nous soit pénible de prendre une telle mesure envers un ancien élève de l’école nous vous enjoignons de n’y plus remettre les pieds.’ This notification, drawn up by Comte, had his signature at the head of the list. The result was his expulsion. His official career was at an end. He was forced to return home; and remained there some time under the surveillance of the police.

We do not learn, but we may imagine, what was his reception at home, and of what nature were the debates as to his possible future. He remained some months at Montpellier, pursuing his studies with passionate devotion, and attending the various lectures at the Faculty. But this could not last. Paris allured him. In vain were the remonstrances and threats of his troubled parents; in vain their refusal to give him a penny if he quitted his native city without an assured position; the desire for freedom and the manifold attractions of the great intellectual centre were all powerful; and he found himself lonely in the crowded capital, ready to begin that eternal struggle in which year after year so many noble intellects equipped with nothing but a little knowledge and an immense ambition, fight for bread and distinction, are wounded and worsted, are wounded and conquer. A greater intellect moved by a loftier ambition has rarely fought that noble fight.

He supplied his very modest wants by giving private lessons in mathematics. Two illustrious men of science befriended him—Poinsot, who had been his professor at the École Polytechnique, and knew his mathematical power; De Blainville, who early recognised his philosophical calibre. By their aid a few pupils were obtained; one of them was the Prince de Carignan. The bread was scanty, but he wanted little more than bread. He was not one of those who founder on the sunken rocks of Parisian life.

A brief experience of a less independent position seems to have sufficed. He became private secretary to Casimir Périer; but quickly found that the paid servant was expected to be a blind admirer. Called upon to make some comments on the public labours of his master, ‘elles ne furent pas goûtées;’ and after a trial of three weeks the connection ceased. From Casimir Périer he passed over to the celebrated St. Simon. This was in 1818. The young philosopher hoped that he might live in harmony with a philosopher; and for some years he did so. I cannot ascertain precisely the footing on which they stood together. M. Littré says that

Comte was first secretary, then pupil, then collaborateur and friend. Dr. Robinet says that the secretaryship was practically an honorary one, for although three hundred francs a month were promised, only the first quarter's salary was ever paid. Whatever the nature of the relation, it subsisted for six years, beginning with great enthusiasm on Comte's part, continuing for some time with affectionate veneration, and ending in a violent rupture which was the culmination of a growing dissidence in opinion.

There have been angry accusations and angry recriminations from the disciples of St. Simon and the disciples of Comte which render the task of an impartial biographer somewhat difficult. But whatever may have been the personal influence of St. Simon, for good or evil, on the direction of Comte's aims, a superficial acquaintance with the Positive Philosophy will detect its essential independence of, and divergence from, St. Simonianism. When, therefore, writers sarcastically or indignantly assert that Comte 'borrowed St. Simon's ideas,' they disclose a complete misapprehension of all that characterises the Positive Philosophy. On the other hand it is unnecessary to assail St. Simon, and accuse him of being an ignorant charlatan, in order to prove what his own language and the express declaration of his editor unequivocally establish, namely, that he not only disapproved, he failed even to understand, the doctrines of his young collaborateur.

As a point in the history of philosophical evolution it is clear that Comte does not proceed from St. Simon, but from the eighteenth century: its twofold movement towards destruction and reconstruction he resumed in one grand synthesis by means of a thorough application of the Methods of Science. Nevertheless, as a detail in the biographical evolution of Comte's own mind, it is, I think, undeniable that the influence of St. Simon was decisive. By which I mean that through personal contact with this reformer his mind received the stimulus, if not the bias, which at that peculiar stage of his development was a determining one.

At the age of twenty, familiar with all the inorganic sciences (Biology he had not then studied, and Sociology had not been conceived), well read in history, fervent in republicanism, and ambitious of mastering the great laws of social existence, this inheritor of the eighteenth century spirit, regarding Philosophy and Science as instruments for the dissolution of theological superstitions and feudal inequalities, came into affectionate and reverential contact with one whom some regard as a turbulent charlatan, and others as a prophetic thinker, but whom all must admit to have been impressed with the urgent need and possibility of replacing the critical and destructive tendency by a positive and constructive tendency; and the immediate consequence of this contact was, that Comte learned to look upon the revolutionary work as completed, and saw that the effort of the nineteenth century must be towards the reconstruction of society upon a new basis. The old faith was destroyed, a new faith was indispensable.

Probably most readers will agree with M. Littré, that so potent an intellect as Comte's might easily have passed from the revolutionary to the organic attitude without any impulse from one so manifestly his inferior as St. Simon: but 'what might have been' is an idle hypothesis when we know what was; and in Biography, as elsewhere, we should guard against the tendency to substitute a possible evolution for an actual evolution. The simple biographical fact is, that in his youth Comte passed from the negative to the positive attitude while under the influence of a teacher whose special aim was constructive. He called himself a disciple of St. Simon; and it is not clear what he could have learned from such a master, except the necessity of a constructive attitude.

An attitude, however, is not a doctrine; an aim is not a philosophy. The impulsion may have come from St. Simon; the doctrine assuredly came from Comte, and from him only. It was probably owing to his keen perception of the irreconcilability of his ideas with the ideas of St. Simon, and the

pardonable exasperation he felt at ungenerous accusations, that made him in his later years speak of his old master with excessive bitterness. His tone was that of a man who feels himself to have been deeply injured. So far from acknowledging any intellectual debt, he, who was nobly scrupulous in acknowledgment of all such obligations, however trifling, always affirmed that St. Simon's influence had been a serious retardation of his development. What the truth may be cannot now be ascertained. It is certain that his development was surprisingly rapid, and that four years after his first meeting with St. Simon, namely in 1822, he laid the solid basis of the new philosophy, which he called 'positive,' because it was the generalisation of the method which each positive science had employed in particular. Like Bacon, he schemed in his youth what a laborious life was devoted to work out.

St. Simon had vast aspirations, but he misconceived the fundamental conditions of social reorganisation. He was, moreover, altogether unprepared for a system based upon positive science, the more so because he was unacquainted with the methods of science; and accordingly, when Comte, in 1822, having discovered the laws of social evolution, drew up his memorable *Plan des travaux nécessaires pour réorganiser la Société*, it must have dawned upon St. Simon that his young assistant had become his rival and superior. He published the Essay, but even in publishing it disclaimed agreement in its peculiar views. Others thought more highly of it; among these were Humboldt and Guizot. In writing to a friend, the young philosopher could say, "J'ai été agréablement affecté (je ne dis pas surpris) de l'effet que ce travail a produit sur M. Guizot; il m'en a témoigné par écrit une profonde et sincère satisfaction, et depuis j'ai pu voir par sa conversation que ces idées agissent sur lui." He also mentions its effect on Flourens, adding, "Je dois avoir avec lui un entretien important sur l'idée fondamentale de mon travail, l'application de la méthode positive à la science sociale."

The open rupture with St. Simon took place in 1824. The next year may be considered the year when the Positive Philosophy was constituted; for, as M. Littré reminds us, the Essay of 1822, republished in 1824, only sets forth the laws of social evolution, but does not give even an outline of the Positive Philosophy, which is for the first time expressly announced in the *Considérations Philosophiques sur les Sciences et les Savants** (published in the *Producteur* in 1825). In the two pregnant essays which thus form, as it were, the inaugural thesis of the young philosopher, it is shown (1) that all phenomena, even those of politics, are subject to invariable laws; (2) that the human mind passes from initial theological conceptions to final positive conceptions, through the transition of metaphysical conceptions; (3) that human activity, in like manner, passes through three phases, from the conquering military régime to the pacific industrial régime, through the transitional state of a defensive military régime; (4) that everywhere, and at all times, the state of opinions and manners determines the institutions, and that the nature of the general beliefs determines a corresponding political régime; (5) that philosophy (or general beliefs) in passing from the theological to the positive stage must bring about the substitution of the industrial for the military régime; and finally, that the spiritual reorganisation, which is the necessary condition of all social reorganisation, must repose upon the authority of demonstration, it must be based upon science, with a priesthood properly constituted out of the regenerated scientific classes. In other words, the spiritual authority must issue from a philosophy which can be demonstrated, not from a philosophy which is imagined.

The year 1825 is memorable on other grounds; it is the date of his marriage with Caroline Massin, bookseller, then (as I infer from a phrase in one of his letters to me) in her

* This essay, with others, will be found appended to the fourth volume of the *Système de Politique Positive*: they form an excellent introduction to the study of Positivism.

twenty-fourth year. There is no graver event in a man's life than marriage. It may prove an inestimable blessing, the subtle influences of which will permeate every hour of the day, strengthen every fibre of his moral being, and by its satisfying repose to the affections, give his intellect a calmer and more continuous sweep. It may also prove a desolating evil, numbing the sympathies, irritating and scattering the intellectual energies, distorting the life. In Comte's case the marriage was unhappy. In spite of mutual admiration there was some essential cause of disunion, which led to much unhappiness and a final separation. Into the very delicate question of culpability I do not feel inclined to enter. The relations of man and wife are too complex and too obscure for a bystander to appreciate, even when he has personal knowledge to aid him. I have no knowledge of Comte in his domestic relations; and MM. Robinet and Littré are so transparently in the position of partisans, one vehemently reviling Madame Comte, the other artfully pleading her cause, that little reliance should be placed on either. M. Littré is more measured in his judgments than Dr. Robinet, whose imputations cannot be sustained in presence of the documentary evidence of letters from De Blainville, Comte, and Madame Comte; but M. Littré, who has long been the intimate friend of Madame Comte, suppresses important facts, and uses others with insidious effect. In presence of such *ex-parte* versions we shall do well entirely to suspend judgment.

Enough for us here to know that Comte was initiated into domestic life at a time when there seemed very little prospect of his being able to earn more than a precarious subsistence. His family at first opposed the match, but finally gave a reluctant consent: though, to their grief, the religious ceremony was resolutely declined, and a civil marriage was all that Comte would accept. We shall hear more of this presently. Meanwhile we must think of the young couple as dependent entirely on the proceeds of lessons in mathematics. At the time of their marriage Comte had but one

pupil: that pupil was the 'Bayard of our day,' as his admirers style General Lamoricière. With the small sum of money brought by his wife, a modest lodging was furnished in the Rue de l'Oratoire. Here M. de Narbonne proposed to place his son as boarder and pupil. Other aristocratic families would, it was hoped, follow the example. To receive these pupils a more dignified apartment was taken in the Rue de l'Arcade, at the corner of the Rue St. Lazare; and fresh furniture had to be bought. Their small stock of ready money was thus invested, but the pupils never came, and the apartment was a burden. In a few months the solitary boarder was sent back, and the young couple had to migrate to more modest lodgings in the Rue Montmartre (No. 13). Here Comte, although unwilling to divert his attention from the working out of the great scheme which he was then meditating, was persuaded to earn a little money by publishing an occasional essay in the *Producteur*. To this we owe the *Considérations Philosophiques sur les Sciences et les Savants*, and the *Considérations sur le nouveau pouvoir spirituel*.

By the month of April, 1826, the system was sufficiently matured in his mind for a dogmatic exposition, which he announced in a course of seventy-two lectures to be delivered in his private rooms. There is something imposing in the magnitude of the attempt. One hears with surprise of a young and obscure thinker proposing to expound the philosophy of all the sciences, aiming at the reconstruction of a Spiritual Power, and calling upon his auditors for a year's severe attention to his scheme. One is still more surprised to hear the names of the auditors who were prepared to give this attention: Humboldt, Poinso, De Blainville, Montebello, Carnot, d'Eichthal, Cerclet, Allier, and Mongéry. A scheme so gigantic might, indeed, have originated in a colossal vanity unimpeded in its pretensions by any definite knowledge of what the scheme implied; for the ignorant are often seduced by their ignorance into pretensions which a little knowledge would repress. It is as easy to write a check for

ten millions as for ten pounds—when you have nothing at your banker's. But the presence of an audience such as I have named, and in such a place, proves that the pretensions were recognised by competent judges, and that the lecturer had inspired men of position with the conviction that he had something important to say.

It will be readily understood, by any one acquainted with the intense cerebral excitement which attends the elaboration of great conceptions in their systematic co-ordination, that the strain on Comte's mind, amid various vexations, and particularly in the agitation of vehement personal quarrels, proved too much for him. After the delivery of three or four lectures, an attack of insanity abruptly closed the course. For some weeks previously he had displayed an irritability and violence of temper which alarmed his wife. She, not unnaturally, attributed to malignity what was due to disease. On Friday, the 24th April, he went out and did not return home. On Monday a letter came, dated from St. Denis, whither his wife hastened, but found him no longer there. Remembering that he was very fond of Montmorency, she went there on the chance of finding him; and found him in a pitiable condition. A physician was sent for, who confessed the case to be alarming, but dared not bleed the agitated patient.

The excitement subsided, and he expressed a wish to go out for a walk. She imprudently consented, and accompanied him. As they came to the edge of the lake of Enghien, he suddenly declared that although he could not swim he should not be drowned if he walked into the lake; and he began to drag his wife with him. She was young and strong; struggled, caught hold of a tree, and saved them both.

But now came the difficulty of getting him back to the inn. His excitement rapidly increased. The peasants refused all offers tempting them to act as guardians while his wife hurried to Paris to seek the assistance of De Blainville; and she was forced to leave him under the charge of two

gendarmes. She returned from Paris to find him in a worse condition. In the morning De Blainville arrived followed by M. Cerclet. They contrived by stratagem to get him to Esquirol's establishment for the insane; and there his exaltation was so great, that it was regarded by Esquirol as a favourable prognostic of an early recovery. Unhappily the recovery was slow, and would probably have been impossible had he not quitted the madhouse, with its incessant irritations, for the soothing influences of domestic quiet. On hearing the melancholy news, Comte's mother at once came to Paris to attend on him; and she remained there till he quitted the Asylum. De Blainville, after seeing summer and autumn pass away without sensible improvement, justly concluded that hatred of his keepers and the system of treatment perpetuated the excitement. Comte's father hereupon proposed that he should be removed to Montpellier. But the wife wished to have her husband under her care, and her plan was adopted.

A grotesque and lugubrious farce was played on the day of his quitting the establishment. I have already mentioned the pain and indignation of his family at his refusal to give his marriage the religious sanction of a Church ceremony; and this refusal was now regarded by his parents as the origin of the calamity which had fallen on him. The confidence with which people see the 'finger of God' in human afflictions, and see their own anger confirmed by His 'judgments,' is too constantly exemplified for us to think harshly of the mistaken parents. But I cannot without pain hear of a man like Lamennais being mixed up with what followed, namely, the attempt to make peace with offended Heaven by inducing the insane heretic to submit himself to the dictates of the Church he detested, and ask for a religious ceremony to sanction his marriage. By what arts the consent was gained, is not said; but in a lonely chamber of Esquirol's madhouse this gloomy farce was played. The officiating priest was deficient in tact, and instead of shortening the

ceremony, lengthened it by a prolix discourse which excited Comte; and the shocking spectacle was presented of a priest pouring forth pious exhortations, extremely unsuited to the mental condition of the maniac, who kept up a running commentary of anti-religious incoherencies! The state of his mind was exhibited when he came to affix his signature, —after his own name he added Brutus Bonaparte. But the ceremony was performed; the Church was satisfied; the tender consciences were at peace.

He left the establishment for ever. His nurses were now his mother and his wife. Iron bars were placed before the windows of his lodging, and Esquirol sent a keeper to help and protect them. But at the end of a week it was found necessary to do away with these precautions, which made the unhappy man still imagine himself in the establishment he hated. From that moment his recovery began. In three weeks' time he was left alone with his wife. His violence at first caused serious anxiety. Twice a day, at meals, he would try to plant his knife in the table, in imitation, he said, of Sir Walter Scott's highlander; and he would call for a succulent pig, in imitation of Homeric heroes. More than once he threw his knife at Madame Comte—not, as she believes, with any intention of injuring her, but merely to frighten her into compliance with his wishes.

At the end of six weeks all immediate danger was over. A new danger emerged in the profound melancholy which gradually overclouded him, as with returning health there came upon him the conviction that he could no longer live that life of intellect which had once been his. Life could in future be nothing but a weariness, now that his powers were gone. The idea of suicide arose. One day, during his wife's absence, he slipped out, hurried to the Seine, and threw himself into it from the bridge. A soldier plunged in and saved him. The shock seems to have roused his energies; perhaps by determining a different impulse to his circulation. He expressed great regret for his attempt, and the grief he had thereby caused his wife. From this time there was no

relapse. In the month of July he was well enough to visit his parents at Montpellier.*

It is not without a purpose that I have told this story of the severe cerebral attack in its painful details. The fact that he had been insane was openly avowed by himself, in anticipation of the ignoble pretext which he foresaw that it might furnish to his adversaries, who would more easily dismiss his philosophical ideas as the reveries of a madman than point out incoherencies and refute arguments. We are so ready to see the love of singularity, the distorted conceptions of eccentricity, or the illusions of a 'heat-oppressed brain,' in any departure from our own ways of thought, that when a man comes before us with opinions we do not understand, or understanding do not like, and that man is known to have been actually insane at one time, the temptation to charge his opinions on his insanity is very strong indeed. But although Comte was really out of his mind for one brief period, he was perfectly sane and sound when he first conceived, and when he finally executed, the scheme of his philosophy. Had the work been elaborated in a madhouse, or published while the author was insane, there would be an excuse for dismissing it unexamined; in such a case, however, examination would have disclosed something like a miracle which would have revolutionised all our ideas about insanity. Every one must see that a body of doctrine so compact and organically related in its parts, could only have been wrought out in the plenitude of mental power. Call that doctrine mischievous, erroneous—what you please—only not incoherent. The intense concentration it demanded may have been the predisposing cause of the insanity, but the insanity had nothing to do with the production of the philosophy. Nor will any one who is even superficially acquainted with the phenomena of mental disease, and who understands that all disease whatever is only a disturbance of equilibrium in the functions, suppose that when the disease has passed

* I have followed M. LITTRÉ in this narrative of the attack, because it is confirmed, to a great extent, by documentary evidence, though of course the story proceeds from Madame Comte.

and the equilibrium is restored, the functions will not resume their normal activity, the insane man becoming perfectly sane, and capable of as accurately co-ordinating ideas as before. The fevered pulse becomes normal in its beats, the inflamed mucous membrane becomes normal in its power of secretion, and the over-stimulated brain becomes normal in its action, when once the disturbing causes are removed.

There is, therefore, nothing remarkable in the fact that Lucretius and Cowper wrote their immortal poems during lucid intervals of frequent cerebral attacks. The philosophy of Lucretius has indeed been often affiliated on his insanity; but the sweet piety, the delicate humour, and the sustained excellence of Cowper, have not been thus branded; and they show that the mind is lucid in its lucid intervals. The list of illustrious madmen is a long one. Lucretius, Mahomet, Loyola, Peter the Great, Haller, Newton, Tasso, Swift, Cowper, Donizetti, spontaneously occur as the names of men whose occasional eclipse by no means darkens the splendour of their achievements. To these we must add the name of Auguste Comte, assured that if Newton once suffered a cerebral attack without thereby forfeiting our veneration for the *Principia* and the *Optics*, Comte may have likewise suffered without forfeiting his claims on our veneration for the *Philosophie Positive*. But the best answer to this ignoble insinuation is the works themselves. If they are the products of madness, one could wish that madness were occasionally epidemic.*

I return to the narrative of his life. In 1828 he recommenced that oral exposition of his system which we have

* Let us hear him on this point;—'Après que la médecine m'eut enfin heureusement déclaré incurable, la puissance intrinsèque de mon organisation, assistée d'affectueux soins domestiques, triompha naturellement, en quelques semaines, au commencement de l'hiver suivant, de la maladie, et surtout des remèdes. Ce succès essentiellement spontané se trouvait, dix huit mois après, tellement consolidé que, en Août, 1828, appréciant dans un journal le célèbre ouvrage de Broussais sur L'Irritation et la Folie, j'utilisais déjà philosophiquement les lumières personnelles que cette triste expérience venait de me procurer si chèrement envers le grand sujet.'

seen so cruelly interrupted. This time it was in his lodgings, Rue Saint Jacques, No. 159. The great geometrician Fourier, and the celebrated physician Broussais, with De Blainville, Poinsot, and Mongéry, were among the small audience. He completed the course, and also gave a brief public exposition of his historical views at the Athénée. In 1830 he published the first volume of his Course; but the second volume, owing to the commercial crisis, did not appear till 1835; the sixth and last in 1842. I should add that in 1830 he began to give the gratuitous course of public lectures on Astronomy which was repeated for seven years, and afterwards (1844) published under the title of *Traité Philosophique d'Astronomie Populaire*.

These twelve years (1830–42), embracing the publication of the *Cours de Philosophie Positive*, form what M. Littré justly calls 'the great epoch' in his life: 'Un labeur infini l'attendait; il se soumit sans réserve à cet infini labeur. Douze ans se passèrent pendant lesquels il ferma courageusement sa vie à tout ce qui aurait pu le distraire. Jamais le besoin d'une publicité prématurée ne fit invasion dans son âme. . . . Sévère, persévérant, sourd aux bruits du dehors il concentra sur son œuvre tout ce qu'il avait de méditation. Dans l'histoire des hommes voués aux grandes pensées, je ne connais rien de plus beau que ces douze années.' It would be well that we should bear this in mind. Although the world is called upon to judge results, not efforts—to accept or reject works on their own pretensions, and not on any pretensions claimed for the disinterestedness and labour of the worker—it is but just that, in speaking of the worker, we should remember his claims. Whether it is a system or a sonnet, we agree with the Misanthrope of Molière—

'Monsieur, le temps ne fait rien à l'affaire;'

but the serious worker is regarded with very different feelings from those which are excited by the vain and presumptuous sciolist. Reject the Positive Philosophy if your mind refuses to accept it, but speak of Comte as one who gave a life to its

elaboration; as one who believing that he was commissioned to impart a new faith, accepted the burden with a severe courage, and thought and toiled, relinquishing all other aims, steeling himself against all other seductions, and with a noble disinterestedness devoting himself to the task which he well knew was certain to bring obloquy on him while living, to be followed by an immortal fame.

Shortly after 1830 he refused to join the National Guard. He was cited before the municipality, and was condemned to an imprisonment of three days. He thus proclaimed his reasons:—‘The law declares that the National Guard is instituted to defend the government which France has given herself. If it were simply a question of maintaining order I should not refuse to bear my part; but I refuse to share in political struggles. I shall never attack the government by force. But, being a republican in mind and heart, I cannot swear to defend, at the peril of my life and that of others, a government which I should attack were I a man of action.’ Such language as this would have led to a criminal indictment had not the authorities dreaded the publicity of such a defence. As it was, he remained unmolested.

In 1833 he obtained an office in the École Polytechnique, which with another that soon came to him, and a mathematical class in a private educational establishment, brought ease into his domestic circumstances, and enabled him to dispense with private pupils. From this time, and for some years, he enjoyed an income of 10,000 francs. Hitherto his sole relaxations had been long walks, and what he called his *flâneries philosophiques*. Now he was enabled to indulge his passion for music, and every season had his stall at the Italian Opera. Although without musical culture, he was exquisitely sensitive to music; had a fine voice, and sang certain songs with great effect, particularly *La Marseillaise*, which he gave with vibrating revolutionary fervour.

He read absolutely nothing on Philosophy or Science; he abstained on system. In his early years he had read immensely, and his memory was of extraordinary tenacity.

English, Italian, and Spanish he taught himself simply by taking a book and a dictionary of each language. Gifted with such a memory, his neglect of books was perhaps a greater advantage to the integrity of his philosophising than it would be in most cases. All his knowledge was organised; whatever he had once read was always available.

M. Littré describes his method of composition, which is truly remarkable. ‘He meditated the subject without writing a word. From the general conception he passed to the great divisions, and from those to the details. When this elaboration, first of the whole and then of the parts, was finished, he considered that his volume was completed. And this was true, for on sitting down to write he recovered without loss every one of the ideas which formed the tissue of his work, and recovered them in their order and connection, although not a word had been committed to paper. In this way he composed the course of lectures which embraced the whole Positive Philosophy, and the catastrophe which followed (in 1826) proves that the method was as dangerous as it was puissant.’ When once he began to write he was hurried along by the impetuous current of his thoughts; and the dates which he has given of the composition of various parts of his writings prove the almost incredible rapidity with which he wrote. The sheets were sent to press as fast as they were written; so that the printing of each volume was completed almost as soon as he laid down the pen.

The last of his private pupils, whose name has not transpired, has given an interesting glimpse of his illustrious teacher, in a paper which appeared in *Chambers's Journal* (June 19, 1858). After narrating how he found himself in this position, he adds:—‘Daily as the clock struck eight on the *horloge* of the Luxembourg, while the ringing hammer on the bell was yet audible, the room of my door opened, and there entered a man, short, rather stout, almost what one might call sleek, freshly shaven, without vestige of whisker or moustache. He was invariably dressed in a suit of the most spotless black, as if going to a dinner party; his white

neckcloth was fresh from the laundress's hands, and his hat shining like a racer's coat. He advanced to the arm-chair prepared for him in the centre of the writing-table, laid his hat on the left-hand corner, his snuff-box was deposited on the same side beside the quire of paper placed in readiness for his use, and dipping the pen twice into the ink-bottle, then bringing it to within an inch of his nose, to make sure it was properly filled, he broke silence: "We have said that the chord A B," &c. For three quarters of an hour he continued his demonstration, making short notes as he went on, to guide the listener in repeating the problem alone; then, taking up another *cahier* which lay beside him, he went over the written repetition of the former lesson. He explained, corrected, or commented till the clock struck nine; then, with the little finger of the right hand brushing from his coat and waistcoat the shower of superfluous snuff which had fallen on them, he pocketed his snuff-box, and, resuming his hat, he as silently as when he came in made his exit by the door which I rushed to open for him. This man of few words was the Aristotle or Bacon of the nineteenth century.

'Thus for a year I daily sat a listener, not always attentive, and to the last but dimly conscious of the value of lessons which I can never forget in their higher meaning, though the angles and curves which they explained have long since become to me more meaningless than hieroglyphics.

'One would think that such a teacher, gliding in and out like a piece of clock-work, without an interchange of any of the gentle courtesies of life, would raise only a repulsive feeling in his pupil. It was in vain I tried to break through the coldness of our relations, to establish that little preliminary gossip in which I have found some teachers too ready to employ all the time of their lesson; he seemed to say that he had nerved himself to a disagreeable duty, and that nothing should turn him from it. Only twice did I even succeed in gaining proof that he had something mortal in his composition. I had been six weeks under his tuition,

and still persisted, with more, perhaps, of malice than of ignorance, in using the most abominably ungrammatical French in my written repetitions of his lectures. One morning he lost patience at some solecism more excruciating than usual; and laying down his pen, he turned to me, and said: "Why do you persevere in writing such barbarisms?" "You know I am a foreigner," said I: "how should I do better?" "You can at least do better than this: write as you speak;" and he resumed his pen, correcting every fault of language. From that day, there were few grammatical blunders in my papers. Once again, and this time less wilfully, I encountered the same mild anger. I was at the time studying very hard, generally thirteen hours a day of book-work—a folly bitterly expiated and repented since—and I was seldom in bed till after midnight. One black wintry morning, after harder work than usual, I nodded over the lecture. With no straining of the ears, could I drink in the sense; with no forcing of the eyelids, keep them open. I dared not rise and take a few turns in the room, for this would have been a violation of our habits. So I sat till the humming of the voice, and the scraping of the pen, acted like a lullaby, and I was already three parts asleep, when suddenly a change of tone aroused me, and the words "But you sleep," recalled me to myself, only to see my tutor stalking out of the room, while I vainly tried to catch and appease him. The next day, he resumed the lesson where he had left off on the one previous to my nap, but not a word of reproach was uttered, or of apology allowed, by the insulted sage.

'From that day, I began to love him. Cold or abstracted, as he seemed, the intellectual giant henceforth won almost imperceptibly on the youth. I could not feel, much less measure his greatness, but I acquired an interest in the dry science he taught me; and had I continued under his charge, I might have become a mathematician. I had been taught to fear, not to revere my masters; if I had a liking for any one, it had been in proportion to his laxness; and I now found myself half

unconsciously, and quite unaccountably, gliding into a sort of affection for the most unapproachable, the most uncongenial of them all. I was then the most unreasonable of boy-mortals. I cannot, therefore, suppose that this feeling was due to the sway of pure reason over my mind; I can only think that it arose from an instinctive perception of the smothered kindness which entered so largely into his composition.

'I returned to England to "keep halls," and devote myself to a new range of studies—stigmatised, I believe, by my masters and pastors as pure idleness, because not set down in their books; and it was two years before I was again in Paris. By that time I had become acquainted with what was published of the *Philosophie Positive*. From its pages I had learned that my old tutor was a great man, though hardly yet a celebrated one. I had learned to contrast his earnestness with the *laissez-faire* of others; and a visit to him was one of the first pleasures which I promised myself in the capital most fertile in pleasure to youthful visitors. Mindful of the showers of snuff which had too often attacked my sternutatory muscles, I carried him a Cumnock snuff-box, with one of our Ayrshire pebbles in the lid, and was delighted to find it graciously accepted. He put it at once into a drawer of his writing-table, and then told me that he had given up the use of snuff. He said that he had withdrawn entirely from the world, to devote himself without distraction to the politics of his philosophy—that he no longer even read the newspapers, and had weaned himself from every superfluity.

'It was not till 1851 that I again saw him. He was then the acknowledged chief of a school, and renowned, if not admired, among all thinkers. I had some little trouble in finding his abode, and it was with a beating heart that I pulled the bell-string. An old gentleman in a dressing-gown, with a black neckerchief strung round his throat, opened the door. I almost thought I had misunderstood the porter's directions. "Monsieur Comte?" I inquiringly said.

"It is I, Sir," was the answer.

'The change in his appearance intimidated me, and I hesitatingly mentioned my name. At once he put out his hand and drew me into his sitting-room. Here I was able to remark the wonderful change which had come over his expression since we had last met. He now reminded me of one of those mediæval pictures which represent St. Francis wedded to Poverty. There was a mildness in those attenuated features that might be called ideal rather than human; through the half-closed eyes there shone the very soul of him who had doubted whether he had anything more than intellect. "I did not recognise you," he said, opening a drawer; "but I think of you almost daily. See, I still have your box, and I keep my seals in it, so that I am often reminded of you." He spoke unreservedly of the honourable poverty to which the last revolution, in depriving him of his modest competence, had reduced him, and he told me how the generous sacrifices of some of his disciples had relieved him of the cares of material existence.

'He indulged me with a long conversation, every word of which filled me with fresh wonder. He was no longer the rigid thinker, regular and passionless as mechanism; he seemed to have renewed his youth, to have added something to his former self, but how or what, I could not at the time imagine. In terms unintelligible to me, he referred to relations which had given impulse to his affections; he spoke with enthusiasm of the Italian poets, and of Shakspeare and Milton, whose works he had learned to read in the original; and—O surprise!—taking from his chimney-piece a well-thumbed copy of the *Imitation*, he said: "I read some pages of this book every morning."

'I already had had cause to suspect that under that frigid mask which he wore in earlier years, an impulsive nature and warm affections were concealed; I had heard at the time that the little keepsake I had brought had pleased him so much, that in speaking of it a few days afterwards his eyes glistened; I understood, therefore, that far within him

was a loving soul; and I now learned, from a book which he gave me, the story of how he had found and lost the counterpart, the other half, which he had so long sought. The history of the platonic love to which he owed the late development of his affections is a strange one, and the story of its heroine one of the saddest in the history of crime.'

To return: the year 1842 is doubly memorable: it saw the termination of his great work and of his conjugal life. I have already said that into the domestic question I cannot enter. Be the blame of the failure chiefly hers or chiefly his, the failure sprang from conditions we cannot accurately appreciate. That the separation was her deed, and not his, seems indisputable; and in one of his letters to Madame de Vaux he writes:—'An indispensable separation, all the more irrevocable on my side because I in no way provoked it, completely relieved me of an intolerable domestic oppression, now happily converted into a simple pecuniary charge which my character forbids my feeling in its true weight. In truth, the two first years of that new situation, during the interval between the close of my first great elaboration and the opening of the second, were passed in enjoyment of the negative happiness resulting from this un hoped-for calm succeeding the long and daily agitation.' It is clear from many indications that they quarrelled frequently and violently; their views of life were different, and probably the worldly views of the one were a continual exasperation to the other; but it is also clear that he did not regard her as having done anything to forfeit his respect and admiration; in one of his letters he lays the principal stress on the fact of her having never loved him. He continued for some years to correspond with her on affectionate terms.

With the publication of the *Philosophie Positive* he assured his place among the great thinkers of all ages, but drew upon himself the bitter hatred of rivals and insulted professors, which hatred, being aided by the indignation of theologians, metaphysicians, and journalists, who were irritated at his dangerous doctrines and sweeping scorn, ended in

driving him from his official position. He was turned adrift once more to seek a laborious existence as a teacher of mathematics. The story is told by him in the preface to the sixth volume of the *Philosophie Positive*, and in fuller detail by M. Littré. It need not be repeated here; the sad result is enough. To mitigate the blow, three Englishmen—Mr. Grote, Mr. Raikes Currie, and Sir W. Molesworth—through the intervention of Mr. Stuart Mill, offered to replace the official salary for one year, understanding that at the end of the year Comte would be either reinstated or would have resolved on some other career. The year passed, and his reelection was again refused. At first this troubled him but little. He had learnt to regard the 'subsidy' of his admirers as his right. It was due from the rich to the philosopher; and the philosopher could more effectually use his powers if all material anxieties were taken from him. This, however, was by no means the light in which the case was seen in England. Mr. Grote sent an additional 600 francs, but a renewal of the subsidy was declined. Comte was exasperated. I remember hearing him speak of the refusal as if some unworthy treachery had been practised on him. I tried to explain as delicately as I could what I conceived to be the point of view of his friends who declined to be his bankers; but he had so entirely wrought himself into the persuasion that the refusal was a moral dereliction, and that no excuse could be offered for men who had wealth withholding a slight portion of it from thinkers whose lives were of importance to the world, that I saw explanation was useless. He had a fixed idea on the subject; and it may be seen expressed in haughty terms in his letter to Mr. Mill.* If there is much to be said (and I think there is) in favour of his

* And in a published work: 'Je somme tous les Occidentaux capables de sentir, d'une manière quelconque, la vraie portée de mes travaux, de concourir loyalement, suivant leurs moyens respectifs, au digne protectorat institué pour moi. Si les positivistes incomplets persistaient à motiver leur coupable indifférence sur leurs divergences partielles envers l'ensemble de ma doctrine, je dévoilerais aisément l'égoïsme mal caché sous ce vain prétexte.'—*Système de Politique Positive*, iii., preface, p. xxv.

idea of the duty of the rich towards thinkers whose aims they approve, there is also not a little to be said on the other side, and not a little blame attributable to his manner of urging his claims. He chose to assume a 'haute magistrature morale' which others would not recognise. He professed to speak solely as a philosopher, but showed too much personal preoccupation. It is sad to hear that the result of this was a coolness on the part of Mr. Mill, and the cessation of a correspondence which he had valued, and to which Comte himself attached great value (as appears in one of his letters to me, inquiring into the cause of the silence, and showing anxiety on the subject).

This idea of a subsidy replacing the 'infamous spoliation,' became, as I said, a systematic conception, and he now boldly relinquished all efforts at providing an income, and made a public appeal to his admirers for one. The appeal was responded to during the rest of his life.*

Meanwhile he was to learn the unspeakable influences of a deep affection. We have seen St. Simon giving the bias to his intellect which determined the creation of the *Philosophie Positive*; we have now to see the bias given to his thoughts by a passionate love, which carried him into sentimental and mystical regions little foreseen by his early adherents.

It was in the year 1845 that he first met Madame Clotilde de Vaux. There was a strange similarity in their widowed conditions. She was irrevocably separated from her husband by a crime which had condemned him to the galleys for life; yet although morally free, she was legally bound to the man whose disgrace overshadowed her. Comte also was irrevocably separated from his wife by her voluntary departure; and although morally free was legally bound. Marriage being thus unhappily impossible, they had only the imperfect, yet inestimable, consolation of a pure and passionate friendship. He was fond of applying to her the lines of his favourite Dante—

* The circulars which he yearly sent forth are printed in the prefaces to his *Système de Politique Positive*.

'Quella che imparadisa la mia mente
Ogni basso pensier dal cor m'avulse.'

Every one who knew him during this brief period of happiness will recall the mystic enthusiasm with which he spoke of her, and the irrepressible overflowing of his emotion which led him to speak of her at all times and to all listeners. It was in the early days of this attachment that I first saw him; and in the course of our very first interview he spoke of her with an expansiveness which greatly interested me. When I next saw him he was as expansive in his grief at her irreparable loss; and the tears rolled down his cheeks as he detailed her many perfections. His happiness had lasted but one year.

Her death made no change in his devotion. She underwent a transfiguration. Her subjective immortality became a real presence to his mystical affection. During life she had been a benign influence irradiating his moral nature, and for the first time giving satisfaction to the immense tenderness which slumbered there; she thus initiated him into those secrets of emotional life which were indispensable to his philosophy in its subsequent elaboration. Her death rather intensified than altered this influence, by purifying it from all personal and objective elements.

In one of his letters to her we read:—'Le charmant bonjour auquel je n'ai pu répondre avant hier me laissera le souvenir permanent d'une affectueuse expression caractéristique dont j'éprouve le besoin de vous remercier spécialement, quand vous y avez daigné mentionner votre bonheur de m'acquiescer. En effet, c'est bien là, ma Clotilde, le mot qui nous convient mutuellement, pour désigner à chacun de nous sa meilleure propriété. Plus notre intimité se développe et se consolide, mieux je sens journellement que cette chaste union est devenue chez moi la principale condition d'un bonheur que j'avais toujours ardemment rêvé, mais sans pouvoir, hélas! l'éprouver jamais avant d'avoir subi votre bienfaisant empire.'

The remainder of his life was a perpetual hymn to her memory. Every week he visited her tomb. Every day he

prayed to her and invoked her continual assistance. His published invocations and eulogies may call forth mockery from frivolous contemporaries—intense convictions and disinterested passions easily lending themselves to ridicule—but posterity will read in them a grave lesson, and will see that this modern Beatrice played a considerable part in the evolution of the Religion of Humanity. Philosophic students will admit that to act powerfully on the sentiments of others the philosopher must have first participated in them himself; and that the elaboration of a system in its emotional relations could only be accomplished by a thinker who had been profoundly moved. This initiation was gained through Madame de Vaux. In one of his letters to her he says:—
 ‘Mon organisation a reçu d’une très-tendre mère certaines cordes intimes, éminemment féminines, qui n’ont pu assez vibrer faute d’avoir été convenablement ébranlées. L’époque est enfin venue d’en développer l’activité, qui, peu sensible directement dans le premier volume, essentiellement logique, de mon prochain ouvrage, caractérisera fortement le tome suivant, et encore plus le quatrième ou dernier. C’est de votre salubre influence que j’attends, ma Clotilde, cette inestimable amélioration, qui doit dignement écarter les reproches de certains critiques sur le prétendu défaut d’onction propre à mon talent, où quelques âmes privilégiées ont seules reconnu déjà une profonde sentimentalité implicite, en m’avouant avoir pleuré à certains passages philosophiques, ceux-là même que j’avais, en effet, écrits tout en larmes.’

It may be useful here to remark that Comte is frequently written against by those who know him only at second hand, as offensively dry, hard, materialistic, and irreligious; while by those who have more or less acquainted themselves with his writings, he is frequently condemned as a mystical, sentimental, and despotically moral pontiff. One class objects to him because he allows no place to the emotions; another because he makes philosophy too emotional. One class fulminates against his denial of religion; another class is more disposed to echo the apostrophe of Billaud Varennes

to Robespierre, ‘Avec ton Être suprême, tu commences à m’embêter!’ He is called an atheist; and no one was ever more contemptuous towards atheism. He is called a materialist; and no great thinker was ever less amenable to the objections which that term connotes.

The contradictory charges are grounded upon a misapprehension of the scope and spirit of his philosophy, in the first place; and in the second upon the fact that there is a very wide divergence in Method and results between his early and later works. Up to 1842 he placed himself in the direct line of historical filiation, and subordinated his researches to the Objective Method; he resumed and systematised the efforts of his scientific predecessors in one vast and compact body of doctrine, creating a Philosophy out of the various sciences by giving unity to their scattered generalities. But after 1842 a radical change took place; the philosopher brusquely assumed the position of a pontiff. He changed his Method (and was forced to change it), and coincident with this theoretical transformation, was the emotional transformation, initiated by a profound affection and a profound sorrow.

Before setting himself to the composition of his second great work, Comte is supposed to have had another cerebral attack, though but a slight one, and of brief duration; and it will not be without indignation that impartial readers will observe how M. Littré, apparently to explain his rejection of the doctrines, insinuates that they were vitiated in their origin by that (hypothetical) cerebral attack. From unthinking and reckless adversaries such an accusation might be anticipated. From one who avows himself a disciple it could only escape moral reprobation by being at least plausibly founded. Now on what grounds can M. Littré pretend that the cerebral attack, the very existence of which is a supposition of his own, and the duration of which must have been slight, vitiated the *Politique*, when he refuses to admit that the avowed, long continued, and violent attack which preceded the composition of the *Philosophie* in any

respect vitiated that work? The contradiction is glaring. To suppose that a man issues from an attack of insanity lasting many months and characterised by extreme violence, without injury to his philosophical integrity, and many years afterwards suffers a radical metamorphosis through a very trivial attack, so trivial as to be only suspected from a passing phrase in a letter, is not indeed a supposition beyond the reach of psychological inference, and if supported by evidence would find little resistance; but for a disciple of the *Philosophie* to insinuate that the *Politique* has the taint of insanity, is a contradiction I am forced to point out. The weaknesses and extravagances which strike M. Littré in the second work cannot be adduced in proof, because those who reject the first work might on equal grounds detect insanity in the ideas which to them appear weak and extravagant. Moreover, M. Littré, as a student of Comte, ought not to have overlooked the very obvious germs of these extravagances which are in the *Philosophie*—the tendencies towards despotic systematisation and arbitrary fictions, which in the *Politique* have all the more freedom because unrestrained by established truths. As a student of history he ought not to have overlooked the fact that the unbridled employment of the deductive method was *inevitable* on a topic which was destitute of the requisite inductions; that is to say inevitable in the case of all who are not content to await the slow results of inductive investigation. Finally, and conclusively, M. Littré should not have failed to recognise in the *Politique* the same intellectual force, the same sustained power of conception and co-ordination, although with less successful result, that had commanded his veneration in the *Philosophie*. To reject the work may be permissible; to see in it the work of an intellect distorted by disease is an extravagance greater than any to be found in its pages. The reach of intellect and profoundly moral tone displayed in every chapter, can only be misconceived by those who estimate the force of a thinker by the immediately available truths he offers them—an estimate which would make sad havoc

with the pretensions of a Plato, a Descartes, a Spinoza, or a Hegel.

I am not pleading for the later system. On the contrary, my dissent from it is open and direct. All the later positivists regard me as a heretic. But I am a reverent heretic, nevertheless: that is, I profoundly admire the greatness and sincerity of the thinker, although he seems to have attempted a task for which the materials were not ready. And if men could approach the work with minds sufficiently open to receive instruction from teachers whom on the whole they refuse to follow, capable of setting aside differences, to seize upon and profit by agreements, they would carry away from the *Politique* many luminous suggestions, and that ennobling influence which always rays out from a moral conviction. They must be prepared to find passages to marvel at, passages to laugh at, and passages to fling hard words at. But they will detect even in these the presence of a magisterial intellect carried by the deductive impetus beyond the limits of common prudence; they will detect nothing of the incoherence of insanity. Even the startling suggestion which he propounds on the basis of what he himself calls a daring hypothesis—i.e. that of the *Vierge Mère*—is a legitimate deduction from what many regard as established data; it happens to be absurd because the data are profoundly erroneous, although they have been, and still are, accepted by many scientific men as truths. Had the data been true, the deduction would have been as admirable as it is now laughable: it would have been a genuine scientific hypothesis.

Antagonism to the Method and certain conclusions of the *Politique Positive* led me for many years to regard that work as a deviation from the Positive Philosophy in every way unfortunate. My attitude has changed now that I have learned (from the remark of one very dear to me) to regard it as an Utopia, presenting hypotheses rather than doctrines, suggestions for future inquirers rather than dogmas for adepts—hypotheses carrying more or less of truth, and serviceable as a provisional mode of colligating facts, to be

confirmed or contradicted by experience. Grave students think it no misuse of time to study the *Republic* and the *Laws* of Plato. Let them approach the *Système de Politique Positive* in a similar spirit; they will find there an intellect greater than Plato's, a morality higher and purer, and an amount of available suggestion incomparably greater.

Although no importance is to be attached to the slight cerebral attack (if attack there were) which preceded the composition of this work, there is intense biographical and psychological significance in the indications of the mental modifications which accompanied what may be called the development of the pontifical spirit in Comte. The germs are visible in his earliest years. No one can study the *Philosophie* without recognising the irrepressible tendency to domination, to a systematizing circumscription of our aims with a view to unity (without, as Mr. Mill justly remarks, any demonstration of the necessity of such unity), and to reliance on deductive reasoning irrespective of objective verification. We see only the germs, because the soil of positive science was ill-suited to their development. Obligated to employ the Objective Method throughout, he was forced to restrain these tendencies, under penalty of failure. As he grew older, and lived more and more alone, absorbed in meditation, less and less occupied with what had been effected by others, his intense self-confidence became enormously exaggerated, and the disposition to take his own feelings as sufficient guarantee and proof, grew more and more disastrous. The very vividness of his conceptions, rising up during long and lonely meditation, rendered it difficult for him to doubt their reality; while the deductive impatience natural to a systematic intellect prevented his verifying their reality. He first struck out an hypothesis; he then over-leaped the next condition of testing its conformity with fact: it became a truth in his mind, and he proceeded to deduce from it as from a verified truth. The awakening of an intense emotional life, and the welcome homage of a few ardent disciples, contributed their share. The conviction of an

apostolic mission grew apace. The transformation of the systematic theorist into the pontiff was rapid. Those who were subjugated by his personal influence, or fascinated by the seeming truth of his doctrines, will see a logical development in this; whereas we who stand aloof can see in it nothing but the unfortunate fatality which seems attached to deep convictions in certain powerful and arrogant natures. Those who consider Mahomet an impostor, and Loyola a malignant despot, may brand Comte with similar epithets of scorn or hatred. But if with a deeper sympathy and wider knowledge we mark the line between infirmity and strength, recognising that where the lights are brightest there the shadows are darkest, we shall be careful not to confound a common infirmity with an uncommon greatness. Hundreds of men have been as vain, as arrogant, as despotic in their ideas; but how many have been as severely ascetic, as profoundly moral, as devoted to high thoughts, and as magnificently endowed? We need not accept the errors of a great mind because of its greatness; but ought we to forget the greatness when we reject the errors?

After the publication of the *Politique* there is little of biographical importance to be added. In 1852 he had published the *Catéchisme Positiviste*, a little work which, I think, has done more to retard the acceptance of his views than all the attacks of antagonists. It contains many profound and noble passages, and to thorough disciples is doubtless a precious work; but it should have been an esoteric work, at least for many years. Catechisms are for the converted. The objections to this one, apart from the ideas which, to all but believers, must appear without adequate foundation, are, first, that being brief and popular in form it is seized on by those who wish to 'know something about Comte' and are unwilling to take the requisite labour of reading the more serious works; secondly, because he was incapable of conducting a popular exposition in a dramatic form, and a perpetual sense of the ridiculous accompanies the reader, preventing his giving serious attention to the

matter; thirdly, because in this unpromising and unconvincing form it puts forth ideas which could only escape ridicule and indignation by a very earnest, logical, and persuasive exposition. If my voice can have the slightest weight with the reader, I beg him not to open the Catechism until he has carefully studied the two great works by which Comte will live in history.

The *Synthèse Subjective* he did not live to finish. It contains some precious thoughts, and much that is startling and extravagant. I am given to understand that some eminent mathematicians think highly of the mathematical philosophy it propounds.

Dr. Robinet has sketched the routine of Comte's daily life in these later years. The picture should be meditated by those whose theological irritation has led them to throw hard words at this 'materialist and scoffer.' He rose at five in the morning, prayed, meditated, and wrote until seven in the evening, with brief intervals for his two meals. Every day he read a chapter from the *Imitation of Christ* and a canto of Dante. Homer also was frequently re-read. Poetry was his sole relaxation now that he could not longer indulge his passion for the opera. From seven to nine (and on Sundays in the afternoon) he received visits, especially from working men, among whom he found disciples. On Wednesday afternoons he visited the tomb of Madame de Vaux. At ten he again prayed and went to bed. The hour of prayer was to him an hour of mystic and exquisite expansion. Nothing could be simpler than his meals: breakfast consisted only of milk; dinner was more substantial, but rigorously limited. At the close of dinner he daily replaced dessert by a piece of dry bread, which he ate slowly, meditating on the numerous poor who were unable to procure even that means of nourishment in return for their work.

He died on the 5th of September, 1857, at the age of sixty, leaving behind him an immortal name, and an almost canonised position in the memory of a select few, who still carry out, with admirable energy, the efforts to establish and

spread the Religion of Humanity, undismayed by the ridicule and social persecution which await every religious movement at its outset.

The increasing notoriety of the name of Auguste Comte is significant of a spreading sympathy and a spreading dread. In grave treatises and in periodical works his opinions are silently adopted, openly alluded to, and discussed with respect; but much oftener they furnish a flippant sentence to some jaunty journalist, or pander to the austere dishonesty of some polemical theologian. Indignation, scorn, and ridicule are poured forth with all the greater freedom because usually unhampered by any first-hand knowledge. It is with him as it used to be with Kant, who not many years ago was a standing butt: many who had never opened the *Kritik*, and more who would have understood nothing of it had they read it, laughed at the 'dreamer' and his 'transcendental nonsense,' without any misgiving that they were making themselves ridiculous in the eyes of those who knew something about Kant. They are now respectful or silent. Surely it is wise to be entirely silent about that of which we know ourselves to be ignorant? As if our natural liability to error were not frequently misleading us, even in our most pains-taking inquiries, we must add to it by what Mr. Mill somewhere calls 'the abuse of the privilege of speaking confidently about writers whom we have never read.' Few reflect that the exercise of this privilege is foolish; still fewer that it is dishonest. There is always peril in pretence. Silence cannot commit us. And if many delusively imagine that they do know enough of Comte to form a general estimate of him, let them ask themselves whether this knowledge is anything more than the echo of what others have said, those others being for the most part antagonists? Such a question would silence the candid; nothing will silence the garrulous and ignorant.

§ II. THE POSITIVE PHILOSOPHY.

Philosophy, as we have seen in the various phases of its history, has always had one aim, that of furnishing an Explanation of the world, of man and of society; but it has sought that aim by various routes. To solve the problems of existence, and to supply a rule of life, have constituted its purpose more or less avowed. Steady in this purpose, it has been vacillating in its means: now borrowing and now rejecting the principles and conclusions of its rival, Theology; now claiming and now violating the methods of Science; unwilling to follow either, incapable of advancing alone. We have seen it endeavouring to embrace all inquiry; and seen it in despair restricting itself to Psychology, in spite of the manifest incompetence of Psychology, even were it perfected, to furnish cosmical and social theories: an incompetence more or less recognized by metaphysicians, who refused to restrict their wide-sweeping inquiries to the mere investigation of human faculties, and the conditions of thought.

With the creation of the Positive Philosophy this vacillation ceases. A new era has dawned. For the first time in history an Explanation of the world, society, and man, is presented which is thoroughly homogeneous, and at the same time thoroughly in accordance with accurate knowledge: having the reach of an all-embracing System, it condenses human knowledge into a Doctrine, and co-ordinates all the methods by which that knowledge has been reached, and will in future be extended. Its aim is the renovation of Society. Its basis is Science—the positive knowledge we have attained, and may attain, of all phenomena whatever. Its method is the Objective Method which has justified its supremacy by its results. Its superstructure is the hierarchy of the sciences—i.e. that distribution and co-ordination of general truths which transforms the scattered and independent sciences into an organic whole wherein each part depends on all that precede, and determines all that succeed.

The cardinal distinctions of this system may be said to arise naturally from the one aim of making all speculations homogeneous. Hitherto Theology while claiming certain topics as exclusively its own (even within the domain of knowledge) left vast fields of thought untraversed. It reserved to itself Ethics and History with occasional incursions into Psychology; but it left all cosmical problems to be settled by Science, and many psychological and biological problems to be settled by Metaphysics. On the other hand Science claiming absolute dominion over all cosmical and biological problems, left Morals and Politics to metaphysicians and theologians, with only an occasional and incidental effort to bring these also under its sway. Thus while it is clear that society needs one Faith, one Doctrine, which shall satisfy the whole intellectual needs, on the other hand it is clear that such a Doctrine is impossible so long as three antagonistic lines of thought and three antagonistic modes of investigation are adopted. Such is, and has long been, the condition of Europe. A glance suffices to see that there is no one Doctrine *general* enough to embrace *all* knowledge, and sufficiently warranted by experience to carry irresistible conviction.

Look at the state of Theology:—Catholicism and Protestantism make one great division; but within the sphere of each we see numerous subdivisions; the variety of sects is daily increasing. Each sect has remarkable men amongst its members; but each refuses to admit the doctrines of the others. There is, in fact, no one general doctrine capable of uniting Catholics, Protestants, and their subdivisions. Look also at the state of Philosophy. There is no one system universally accepted; there are as many philosophies as there are speculative nations, almost as many as there are professors. The systems of Germany are held in England and Scotland as the dreams of alchemists; the Psychology of Scotland is laughed at in Germany, and neglected in England and France. Besides this general dissidence, we see, in France and Germany at least, great

opposition between Theology and Philosophy openly pronounced. This opposition is inevitable: it lies in the very nature of Philosophy: and although, now as heretofore, many professors eagerly argue that the two are perfectly compatible and accordant, the discordance is, and always must be, apparent.

With respect to general doctrines, then, we find the state of Europe to be this: Theologies opposed to Theologies; Philosophies opposed to Philosophies; and Theology and Philosophy at war with each other. Such is the anarchy in the higher regions.

In the sciences there is less dissidence, but there is the same absence of any general doctrine; each science is on a firm basis, and rapidly improves; but a Philosophy of Science was nowhere to be found when Auguste Comte came forward with the express purpose of supplying the deficiency. The *speciality* of most scientific men, and their incapacity of either producing or accepting general ideas, had long been a matter of complaint; and this has been one great cause of the continuance of Metaphysics; for men of speculative ability saw clearly enough that however exact each science might be in itself, it could only form a part of Philosophy. Moreover the evil of speciality is not confined to neglecting the whole for the sake of the parts; it affects the very highest condition of Science, namely, its capability of instructing and directing Society.

In the early ages of speculation, general views were eagerly sought and easily obtained. As Science became rich and complex in materials, various divisions took place; and one man cultivated one science, another man another. Even then general views were not absent. But as the tide rolled on, discovery succeeding discovery, and new tracts of inquiry leading to vast wildernesses of undiscovered truth, it became necessary for one man to devote himself only to a small fraction of a science, which he pursued, leaving to others the task of bringing his researches under their general head. Such a minute division of labour was necessary for the

successful prosecution of minute and laborious researches; but it ended in making men of science regard *only* the individual parts of science; the construction of general doctrines was left to philosophers. A fatal error; for such doctrines could only be truly constructed out of the materials of Science and upon the Method of Science.

In the present state of things the speculative domain is composed of two very different portions,—general ideas and positive sciences. The general ideas are powerless because they are not positive: the positive sciences are powerless because they are not general. The new Philosophy is destined to put an end to this anarchy, by presenting a Doctrine which is *positive*, because elaborated from the sciences, and yet possessing all the desired *generality* of metaphysical doctrines, without possessing their vagueness, instability, and inapplicability.

How is this to be effected? Obviously by taking Science as the basis. The teaching of history is clear. Everywhere, Science with its all-conquering Methods is seen steadily advancing, drawing more and more subjects under its rule, yielding answers to more and more problems, while Theology and Metaphysics remain impotent to furnish satisfactory answers, and are constantly found in flagrant contradiction with the certainties of experience. There are but three modes of explaining phenomena, and of these the scientific daily gains strength, the other two daily lose their hold upon men. If the present anarchy is due to the simultaneous employment of three radically incompatible modes of thought, obviously the cessation of that anarchy must follow on the general adoption of only one of these modes of thought. The question is, which are we to select? When Theology was supreme there was unity in doctrine and unity in life. All men accepted the theological explanation of the world, man and society. But in proportion as knowledge advanced this explanation was discovered to be incessantly in contradiction with experience. If, therefore, we are to select the theological mode of thought as our guide, and the

theological explanation of the Cosmos and Society as our doctrine, we must ignore all experience, sweep away all science, and appeal to the Pope or to the Archbishop of Canterbury for answers to the questions in Astronomy, Physics, Chemistry, Biology, and Sociology, which our pressing needs or speculative curiosity may force upon us. Is Europe prepared for this? Is any one nation prepared for it? Is any cultivated mind prepared for it?

The incompetence of Metaphysics has been clearly exhibited in this History. Nothing, therefore, but Science remains. Nevertheless, Science itself only furnishes the basis. It must be transformed into a Philosophy before it can satisfy the higher needs. Even the encyclopædic knowledge of a Humboldt was powerless, because it was scientific knowledge, not Philosophy; and because, moreover, even as scientific knowledge it had the fatal defect of incompleteness—it embraced cosmical, but excluded sociological speculations. Supposing Humboldt to have mastered, what he was far from conceiving, the philosophy of the cosmical sciences, he would still have left the great problem untouched, he would have failed to propound a homogeneous doctrine, since he would have left the vast and important field of moral speculation to theologians or metaphysicians. The completion of the scientific encyclopædia was therefore a necessary preliminary; and this was effected by the creation of Sociology, as a science ranking with the cosmical sciences. This task was reserved for the genius of Auguste Comte. Having done this, he held in his hand the complete materials for an universal Philosophy. All human knowledge was now capable of being treated as a homogeneous and organic whole, one spirit, one method, and one aim presiding over each department.

But this was only the first step, though a step of immense importance. Having before him the materials of a Philosophy, materials furnished by the efforts of all preceding generations, he had next to organise them. The several sciences had to furnish their philosophies, and to yield a

Philosophy which embraced the whole. The philosophy of each science is the coordination of its fundamental truths and special methods; consequently the coordination of these philosophies—the proper distribution of these truths and methods in a dependent series—will yield the Philosophy of Science.

We shall have to consider this organization of the sciences more in detail hereafter; for the present it is enough to point out the position it occupies in the evolution of the new doctrine. When we add thereto the Law of Development, through the theological, metaphysical, and positive stages (of which also more anon), we have completed an indication of the great legacy Comte has left. These are his contributions, his titles to immortal fame. They have been and will be disputed, as all other titles have been and will be. Some deny that they are his; others deny that they are of value. I shall not discuss these questions. But although I consider discussions respecting originality to be commonly interminable and idle, there is one point which may profitably be noticed, and that is the confusion between the positive spirit and method, and the Positive Philosophy, a confusion which once cleared up may prevent much idle dissertation.

What is called the positive or scientific spirit is coeval with Science; indeed, only in that spirit is Science possible; and from the time of Galileo, Bacon, and Descartes, it dates its recognition as a distinct power. In this sense, therefore, we may truly say that positive thinkers have never been wanting, and that the whole course of tradition has set steadily in the direction of the new doctrine. Even the untutored savage so far employed the Objective Method that in certain very familiar and accessible phenomena he was content with the visible and tangible properties, and never sought outlying agencies to account for them. As knowledge advanced men withdrew more and more phenomena from the regency of outlying agencies, and placed them under the regency of immanent properties: deities and entities were replaced by laws.

But the Method was only partially applied. In all cases not sufficiently explored men continued—and the majority still continues—to place unhesitating reliance on the action of outlying agencies, simply because they had not discovered the immanent properties. Hence the continuous spectacle of minds completely dominated by the scientific Method in Astronomy, Physics, and Chemistry, unwilling to extend their principles to Biology, disdainful of the proposal to apply them to Psychology, and regarding it as both foolish and wicked to apply them to History, Politics, and Morals.

If, however, the Positive Method is in germ as old as Science, and if with gradual and ever-accelerated velocity it has encroached upon and absorbed each department of inquiry, so that we now see its final adoption to be inevitable,* this does not in any way lessen Comte's originality, does not diminish the need for a Positive Philosophy, as the offspring of that Method. Positive thinkers may be counted by thousands, but no one before Comte had a glimpse of the Positive Philosophy. Thousands had cultivated Science, and with splendid success; not one had conceived the Philosophy which the sciences when organized would naturally evolve. A few had seen the necessity of extending the scientific Method to *all* inquiries, but no one had seen how this was to be effected; and the proof of this is exhibited in the vague and fragmentary nature of all previous attempts, and in the absence of all vision of it as a renovating and harmonizing principle which could transform Science into a Philosophy and thus furnish a homogeneous

* 'Pour terminer radicalement ce désordre la seule manière est de le détruire dans son principe, en ramenant le système intellectuel à l'unité. Or cela ne peut se faire que de deux manières : ou bien en rendant à la philosophie théologique (car il est inutile de parler ici de la métaphysique, qui ne serait jamais qu'une transition) toute l'influence qu'elle a perdue; ou bien en complétant la philosophie positive de façon à la rendre capable de remplacer définitivement la théologie. Si donc on regarde comme démontrée l'impossibilité de rétablir la théologie dans toute l'étendue de son ancien empire, il n'y a pas d'autre solution admissible que la formation définitive de la philosophie positive.—*Politique Positive*, IV. *Appendice*, p. 160.

Doctrine. In this, as in most other parts of the system, we see how Comte gathered together in one luminous focus the scattered rays which issued from various sides. So long as the rays were scattered men could read but little by their light.

The Positive Philosophy is novel *as* a Philosophy, not as a collection of truths never before suspected. Its novelty is the organization of existing elements. Its very principle implies the absorption of all that great thinkers had achieved; while incorporating their results it extended their methods. To assert, therefore, that Comte only placed himself in the ranks of the advancing column, filling a place which would have otherwise been filled by others, is, I conceive, an immense mistake; and I regret to find Mr. Herbert Spencer countenancing it; though his avowedly superficial acquaintance with the system renders the error excusable. He says, 'M. Comte designated by the term "Positive Philosophy" all that definitely-established knowledge which men of science have been gradually organizing into a coherent body of doctrine.*' Not so: the 'coherent body of doctrine' was precisely that which no one had ever attempted since Science emerged from its metaphysical condition. And Mr. Mill, following in the same track, says, 'the philosophy called Positive is not a recent invention of M. Comte, but a *simple adherence to the traditions* of all the great scientific minds whose discoveries have made the human race what it is. M. Comte has never presented it in any other light (!) But he has made the doctrine his own by his manner of treating it.†' M. Littré, with just astonishment, exclaims, 'The great scientific minds? This term implies what seems to me a confusion. Does it mean the philosophers? Why, the philosophers, one and all, have belonged to theology or metaphysics, and it is not their tradition which M. Comte has followed. Does it mean those who have illustrated particular sciences? Well, since they have not philosophised, M. Comte cannot have received his philosophy from

* SPENCER: *The Classification of the Sciences*, 1864, p. 28.

† MILL: *Auguste Comte and Positivism*, 1865, p. 9.

them. That which is recent in the positive philosophy, that which is M. Comte's invention, is the conception and construction of a philosophy, by drawing from particular sciences, and from the teaching of great scientific minds, such groups of truths as could be co-ordinated on the positive method.*

On reconsideration Mr. Mill may perhaps admit that the light which flashed upon his own mind when first he became acquainted with Comte's work was something essentially unlike what would have issued from a simple adherence to tradition. He had little to learn on the score of what great thinkers had taught, and must have known but too well that they had no coherent body of doctrine to teach. Further, he will admit that Comte, who was keenly alive to the debt he owed his predecessors,† and nobly generous in his recognition of even a suggestion, would have been astonished to hear that what he regarded as his great achievement—the organization of the results of research into a doctrine—was no more than an adherence to tradition. What tradition brought was the results; what Comte brought was the organization of those results. He always claimed to be the founder of the Positive Philosophy. That he had every right to such a title is demonstrable to all who distinguish between the positive sciences and the Philosophy which coordinated the truths and methods of those sciences into a Doctrine. The achievement was great and novel; but its very perfection, which arises from its intimate har-

* *Revue des Deux Mondes*, 15 Août 1866.

† 'Nous avons ainsi systématiquement réalisé une évolution individuelle radicalement conforme à l'évolution nécessaire de l'humanité, que l'on peut maintenant se borner à considérer ici à partir de l'impulsion décisive déterminée par la double action philosophique et scientifique émanée de Bacon et de Descartes conjointement avec Kepler et Galilée. . . . En outre l'homogénéité continue de ces diverses déterminations partielles nous a spontanément manifesté leur convergence croissante vers une même philosophie finale. Pour caractériser convenablement cette philosophie il ne nous reste donc plus qu'à indiquer la co-ordination définitive de ces différentes conceptions essentielles, d'abord logiques puis scientifiques d'après un principe d'unité réellement susceptible d'une telle efficacité, afin de pouvoir signaler la véritable activité normale réservée au système qui doit devenir la base usuelle du régime spirituel de l'humanité.'—*Philosophie Positive*, VI. p. 645-6; compare the passage in the Appendix to the *Politique Positive*, IV. p. 91.

mony with all the great results of scientific research, prevents the feeling of strangeness which usually accompanies novelty.

Having thus defined the position of the new Philosophy in History, and Comte's relation to it, we may look a little closer into its nature. The creation of Sociology, by which the series of the sciences was completed, will perhaps best be appreciated after an exposition of his classification of the sciences. This indisputably was entirely his own, and so far from being simply an ingenious arrangement without capital importance, as many critics have supposed, it is nothing less than the organization of the sciences into a Philosophy. For let us understand the problem:—Given human knowledge in its multiplicity of details and vast extent, how on this basis, and with these materials, to raise a general Doctrine? All must be included, or the Doctrine will be incomplete; no established truths must be contradicted, or the Doctrine will be imperfect. There was no great difficulty in constructing a Philosophy by the aid of one or more of the sciences, selecting such truths as suited the construction, and neglecting such as were adverse to it. That had been done by hundreds. But nothing could be gained by that. The old difficulty remained. To construct a Doctrine which should harmonize all results and embrace all methods, was the labour imposed upon Philosophy. In the presence of the vast accumulations of modern Science the task seemed hopeless. How was any one mind to master all the sciences, and, having mastered them, reduce them to an intelligible system? What lifetime could extend far enough even to traverse these fields, and roads, and byeways? Obviously the first step to be taken was to reduce the chaos to order, to make such a general disposition of the various groups as would enable the mind to see their main bearings—in a word to classify the groups, as each group itself had classified the phenomena it studied. If the reader is unacquainted with Comte's classification he will be in the true condition for

appreciating the immensity of the effort. Let him ask himself how he would proceed if in presence of the vast multiplicity of sciences already established he had to introduce such an order as would of itself constitute a Philosophy because it would represent the serial dependence of all natural phenomena?

The first luminous conception which enabled Comte to discover this order was the fundamental distribution of all sciences into Abstract and Concrete. The abstract sciences are those which treat of the elementary laws, or general facts, on which all the particular facts depend; they are called abstract because in them the mind fixing itself solely on some elementary fact which it discovers under a great variety of phenomena, or complicated with other elementary facts, abstracts this from all its surroundings, purifies it from all its variations, and considers it in itself. Thus all bodies whatever present the elementary facts of Number, Form, and Movement; they present other facts besides these, but these can be considered apart, and from them arise Algebra, Geometry, and Mechanics. Besides Number, Form, and Movement, bodies present facts of Weight, Temperature, Luminousness, &c., which likewise can be considered apart, and Physics is the abstract science of these facts. Further we find bodies presenting facts of combination and decomposition, and Chemistry results. Finally we find certain bodies presenting facts of growth, reproduction, and sensation, and these facts we abstract in Biology.

Whether there are elementary facts capable of being abstracted from social phenomena and yielding a Sociology may, for the present, be left in abeyance: the groups just indicated are groups admitted by every thinker. An attentive consideration of them discloses that they embrace all the elementary facts we have hitherto been able to abstract from cosmical phenomena; and all of these we have been able to consider apart, as pure relations without reference to any special occasion, or any variations in the manifestation of the phenomena. Thus the physical phenomena of falling bodies

are variable and complicated, but the physical law is invariable and simple: the circumstances may vary, the heights may differ, but the relation of the height fallen through to the time of falling remains invariable.

Not only do these groups comprise the whole of the elementary cosmical facts, but implicitly in these facts are comprised all the multiple and complex phenomena ranged under the concrete sciences, which treat of objects as actually presented to us under the conditions of time and space. Geology is a concrete science; so is Mineralogy; so is Botany. Each deals with objects, not with abstract relations. Each considers existences as determined by complex conditions. The rock, the mineral, or the flower is considered as an object involving more or less of the elementary facts of Mathematics, Physics, Chemistry, and Biology; and only through the knowledge of these elementary facts can the objects be known except empirically.

D'Alembert has noticed the paradox that 'les notions les plus abstraites, celles que le commun des hommes regarde comme les plus inaccessibles, sont souvent celles qui portent avec elles une plus grande lumière; l'obscurité s'empare de nos idées à mesure que nous examinons dans un objet plus de propriétés sensibles.*' But the paradox disappears when we reflect that these abstract ideas express the elementary and constant relations of the complex and variable phenomena. It is true that the discovery of these simple relations is a laborious task. At first man is observant only of particular phenomena in their isolation: he then begins to perceive their connexions; and finally decomposes them into their constant relations—this is the birth of Science, which only occupies itself with relations of succession and coexistence.

Abstract Science then is the knowledge of the elementary facts, or Laws of phenomena; Concrete Science is the knowledge of objects as actual combinations of these elements. The one investigates existence, the other individuals. The abstract sciences necessarily precede the concrete sciences

* D'ALEMBERT: *Discours Préliminaire de l'Encyclopédie*.

in dogmatic value; and they suffice to furnish a Philosophy, since they comprise the elements of all speculative knowledge in comprising the elementary facts of universal existence.

What is a law? what is an elementary fact of existence? It is the invariable relation between two distinct phenomena, according to which one depends on the other; the relation being invariable, the only variation which is possible is in the *intensity* of the phenomena or their *direction*. Here therefore we have two distinct aspects of Nature: one which is inaccessible to human intervention, uncontrollable by human skill, a Fatality which must be accepted; and another which is accessible to human intervention, a Modifiability which enables us to convert the Fatality into a power for our benefit. The Laws of Nature are immutable. But owing to this, the resultant phenomena are so far modifiable that their directions may be adapted to our service. We cannot create or destroy a particle of Matter, or a moment of Force; but we can so arrange Matter that the Force shall be our servant.* It is the very unchangeableness of the Laws which renders their results modifiable. Because the course is unswerving, it can be accurately measured, accurately foreseen, accurately directed. The phenomena are but combinations of elementary laws. Each law preserving its value under all circumstances, never varying one iota, we know precisely what will be its value in combination with other laws. The simplest illustration of this is the composition of forces in Mechanics; among the more striking illustrations are the triumphs of discovery on the one side, and of mechanical inventions on the other. Owing to this unchangeableness, a mathematician working with symbols in his study can tell the astronomer to point his telescope in a particular direction, and there for the first time will be seen a planet which has a revolution of 164 years 6 days, and which is twenty-five times as large as our earth; and the astronomer, confident in the previsions of

* 'En considérant que chaque groupe de phénomènes ne peut jamais être entièrement fixe on reconnaît que l'immuabilité des lois naturelles ne saurait convenir aux événements composés, et reste toujours bornée à leurs éléments irréductibles.'—*Synthèse Subjective*, p. 7.

Science, discovers what he is told will be discovered. The formula 'under similar circumstances similar phenomena will appear' carries with it the consequence that when the phenomena are different it is owing to some difference in the circumstances. Not only so, but when the phenomena differ owing to an alteration in the circumstances, there still exist the same fixed relations between them; thus proving that the variations have been variations in the combination of elementary Laws, leaving these Laws unaltered. In other words, the Universe is governed by immutable Laws, general facts which determine all particular facts; and the Abstract Sciences are the registration of these general facts, as the Concrete Sciences are of the particular facts.

Although the division into Abstract and Concrete Sciences, the latter depending on the former, was of absolute importance as a first step, there still remained the need of a classification of the Abstract Sciences themselves, if they were to yield a Doctrine; and the execution of this difficult task displays the genius of Auguste Comte. But the operation seems so easy now it is accomplished, especially to those who have not long meditated on the nature of the problem, that he rarely gains the credit which is his due. Any vulgar mariner can reach America after Columbus.

The classification differs from all previous classifications, as that of Jussieu, in Botany, differed from those of Linnæus and Tournefort, namely, in grounding its divisions on the natural distinctions presented by the phenomena, not on any conception of symmetry or convenience. It is an objective grouping, not a subjective grouping. The principle adopted is that which permeates the Positive Philosophy, namely, the principle of dependence. The Concrete Sciences are separated from the Abstract Sciences because they exhibit particular cases of the general laws, and depend upon them. In like manner the Abstract Sciences themselves are ranged in a serial order constituted by their gradations of dependence; one succeeds the other according to the principle of decreasing generality and increasing complexity, that which has phenomena the most general and least complex

(Mathematics) standing first, and that which has phenomena the least general and most complex (Sociology) standing last. Between these terms the sciences are so distributed that each serves as a necessary introduction to the comprehension of its successors, and each becomes an instrument of exploration taken up by the mind in traversing the field of philosophic investigation. Not only so, but because the series represents the natural order it cannot anywhere be inverted. Each science after the first, embraces phenomena which can only be explained by the laws of the science preceding it in addition to laws peculiarly its own. Thus the truths of Number are the most general truths of all; they are true of all things whatever; all things depend on them, but they depend on no prior conditions. A science of Number, i. e. Arithmetic and Algebra, may thus be studied without reference to any other science. Next in order of generality and simplicity stand the truths of Form; Geometry presupposes the laws of Number, and must therefore be studied with reference to them, but requires no other aids. Then come the truths of Motion, which furnish the science of Mechanics: here we find the operation of the laws of Number and Form necessarily determining the laws of Motion; so that while it is quite feasible to study Algebra and Geometry in ignorance of Mechanics, it is impossible even to state the laws of Equilibrium and Motion without involving the laws of Number and Form. The movement of a body oscillating round a fixed point is determined by the form of that body; but its form is independent of this movement. In Astronomy we have phenomena which depend on these preceding laws of Number, Form, and Motion, and besides these on the law of Gravitation, which law in no way affects the laws of Mathematics. Physics succeeds, and presents us with phenomena which depend on mathematical laws and—inasmuch as all terrestrial phenomena are affected by influences derived from the heavenly bodies—on astronomical laws. Chemistry presents us with phenomena of a peculiar kind, but these are all seen to be influenced by the laws of Physics, Astronomy,

and Mathematics, though they cannot in turn be said to influence these laws. Biology presents us with phenomena of Life, obviously dependent on laws of Chemistry, Physics, Astronomy, and Mathematics, and obviously not influencing these. Finally we have the laws of social existence, embracing the phenomena of human society (Sociology), and these clearly depend on the laws of organic life, and through them on the laws of inorganic nature, on the vital and physical conditions which alone permit society to exist and be developed. But just as it is impossible to deduce social phenomena from biological and physical laws alone, without the aid of laws peculiar to social existence, so is it impossible to deduce vital phenomena from chemical and physical laws, impossible to deduce chemical phenomena from physical and mathematical laws, and impossible to deduce physical phenomena from mathematical laws alone*: thus each science adds its own peculiar group of laws to all those which precede it in the series, and each gathers up into its grasp the methods and results of all that have gone before it, serving in turn as a stepping-stone to that which comes after it.

Thus does the series embrace all human knowledge† as regards the elementary laws of the world, man, and society. It represents both the objective dependence of the phenomena, and the subjective dependence of our means of knowing them. It constructs a series which makes all the separate sciences organic parts of one Science; and it enables the several philosophies to yield a Doctrine which is, what no other Doctrine has ever been, coextensive with human knowledge, and homogeneous throughout its whole extent: that is to say, while theological and metaphysical systems have necessarily been constructed out of heterogeneous

* Impossible at present, and likely to remain so for some generations, although a prophetic view discerns in the distant future a reduction of all cosmical phenomena to Mechanics; the doctrine of vibrations will then be the Abstract Science of which all cosmical sciences will be the Concretes.

† In his later speculations, Comte added a seventh science under the name of Morals, separating its subject-matter from Biology and Sociology. This does not affect the classification, however.

materials, and have either omitted scientific questions, or else have been forced with them to admit the scientific Method on which answers could be gained, this Doctrine treats all knowledge in one spirit, and views the whole Cosmos in one light.

Exactly five-and-twenty years have passed since I first became acquainted with this serial arrangement of the sciences, and, during the interval, its value has been repeatedly tested in the course of my researches both in Science and in the History of Science. Great as that value has been to me, I have several times felt my confidence in it faltering in the presence of facts: these hesitations, however, successively subsided, and left behind them an increased conviction of the importance of the classification. This personal experience is not cited as an argument in favour of the series, but simply as an intimation to the earnest student that he may expect to find doubts arising, and should be slow to condemn it directly it seems imperfect. Only a long application of it will enable him thoroughly to appreciate its value and to set aside certain superficial objections. As to the adverse criticisms of it which have been published, those at least which have fallen in my way, I cannot confess that any of my hesitations came from them. The critics have not taken the trouble to master the principles of the classification; not one of them seems to have considered what the object was, nor how such an object constituted an integral part of the Positive Philosophy. Usually they speak of it as if it were a more or less ingenious arrangement, of no great moment in itself, and easily replaced by some other ingenious scheme. Of its vital importance in the study of Science, and in History, no suspicion is felt. I except, in some degree, Mr. Herbert Spencer, though he also seems to have misapprehended the spirit and aim of the classification, which he has attacked with his usual vigour and acumen in a remarkable essay on the 'Genesis of Science,'* not, I think, with success; and his ill-success appears in stronger relief in the classifica-

* SPENCER: *Essays, First Series*, 1858.

tion which he proposes as a substitute.* M. Littré has examined and satisfactorily refuted his criticisms,† and Mr. Mill remarks that 'after giving to his animadversions the respectful attention due to all that comes from Mr. Spencer, we cannot find that he has made out any case. It is always easy to find fault with a classification. There are a hundred possible ways of arranging any set of objects, and something may almost always be said against the best, and in favour of the worst of them. But the merits of a classification depend on the purposes to which it is instrumental. We have shown the purposes for which M. Comte's classification is intended. Mr. Spencer has not shown that it is ill-adapted to those purposes; and we cannot perceive that his own answers any ends equally important. His chief objection is that if the more special sciences need the truths of the more general ones, the latter also need some of those of the former, and have at times been stopped in their progress by the imperfect state of the sciences which follow long after them in M. Comte's scale; so that the dependence being mutual, there is a *consensus*, but not an ascending scale or hierarchy of the sciences. That the earlier sciences derive help from the later is undoubtedly true; it is part of M. Comte's theory, and amply exemplified in the details of his work.‡ When he affirms that one science historically precedes another, he does not mean that the perfection of the first precedes the

* *The Classification of the Sciences*, 1864.

† *Auguste Comte et la Philosophie Positive*, chap. vi.

‡ Mr. MILL might here have quoted the explicit language of COMTE in introducing his classification: 'En effet non seulement les diverses parties de chaque science qu'on est conduit à séparer dans l'ordre *dogmatique* se sont, en réalité, développées simultanément et sous l'influence les unes des autres, ce qui tendrait à faire préférer l'ordre *historique*; mais en considérant, dans son ensemble, le développement effectif de l'esprit humain, on voit de plus que les différentes sciences ont été dans le fait perfectionnées en même temps et mutuellement; on voit même que le progrès des sciences et ceux des arts ont dépendu les uns des autres, par d'innombrables influences réciproques, et enfin tout ont été étroitement liés au développement général de la société humaine.' *Philosophie Positive*, i. 81; and a little further on he adds that no classification can be rigorously conformable with the historical development. 'Il faut tâcher seulement qu'un tel inconvénient n'ait lieu relativement aux conceptions caractéristiques de chaque science.' *Comp. Politique Positive*, iii. 41.

humblest commencement of those which follow. Mr. Spencer does not distinguish between the empirical stage of the cultivation of a branch of knowledge, and the scientific stage.'

Neither M. Littré nor Mr. Mill has noticed the initial principle of Mr. Spencer's criticism, which is that of the rejection of all distribution of the sciences into a series. 'Did we believe a serial arrangement possible,' he says, 'that of M. Comte would certainly be the one we should adopt.' But he dissents from the conception. 'There is no one *rational* order among a host of possible systems. There is no true *filiation* of the sciences. The whole hypothesis is fundamentally false: indeed, it needs but a glance at its origin to see at once how baseless it is. Why a *series*? What reason can we have to suppose that the sciences admit of a *linear* arrangement? Where is our warrant for assuming that there is some *succession* in which they can be placed? There is no reason; no warrant.'*

No reason? The best of reasons! No warrant? The strongest warrant! The reason for supposing that the sciences admit of a linear arrangement is the fact that the corresponding phenomena admit of it; the dependence of physical laws on the mathematical, and of chemical laws on the physical, and of biological laws on the chemical, is not a figment of Comte's, but an observed fact. As Bichât says of his own classification of the tissues, 'c'est la nature, et non la science, qui a tiré une ligne de démarcation entre eux.' And the warrant for assuming that there is some succession in which the sciences can be placed, is that the effective study of these sciences demands such a succession as the one corresponding to the successive complexity of the phenomena. It is quite true, and no one was more alive to it than Comte, that all the sciences are interwoven, and that the highest seeks aid in the lowest; but because of this are we to reject the immense speculative assistance of a serial arrangement? Mr. Spencer asks, why is a series necessary? It is necessary on grounds similar to those which require that the

* SPENCER: *Essays*, pp. 171-183.

various truths constituting a science should be systematically co-ordinated, although in nature the phenomena are intermingled. That classification of ideas which transforms Common Knowledge into Science, arranging the phenomena in the order of their dependence, and bringing the particular under the general relations, which makes the heterogeneous parts assume a homogeneous unity,—must also be performed for the several sciences. And this operation Comte has effected. No one else has done it.

Because the hierarchy of the sciences is an integral part of the Positive Philosophy it has claimed this somewhat lengthy notice, which is still, however, too brief except as a general indication. We must now pass to another integral part of the doctrine, namely, the creation of a new science, Sociology, which was rendered possible by Comte's discovery of the Law of Evolution.

The necessity of reducing social phenomena to scientific Method had long been felt. The daily increasing disregard for theological and metaphysical habits of thought, and the growing conviction that the Method which had been proved so brilliantly successful in explaining cosmical phenomena ought also to be applied to social phenomena, received a further impulse when the idea became general that social phenomena were in reality subject to Law, and consequently were as capable of scientific investigation as all other phenomena, only far more complicated and difficult. But it is one thing to conceive generally that social science is possible, another thing to create the science. Mr. Mill holds that Comte first made the creation of this science possible, but denies that he created it; as I shall presently have to urge Comte's claim, I will borrow his critic's exposition of what he accepts:—

'The Method proper to the Science of Society must be, in substance, the same as in all other sciences; the interrogation and interpretation of experience, by the twofold process of Induction and Deduction. But its mode of practising

these operations has features of peculiarity. In general, Induction furnishes to science the laws of the elementary facts, from which, when known, those of the complex combinations are thought out deductively: specific observation of complex phenomena yields no general laws, or only empirical ones; its scientific function is to verify the laws obtained by deduction. This mode of philosophizing is not adequate to the exigencies of sociological investigation. In social phenomena the elementary facts are feelings and actions, and the laws of these are the laws of human nature, social facts being the results of human acts and situations. Since, then, the phenomena of man in society result from his nature as an individual being, it might be thought that the proper mode of constructing a positive Social Science must be by deducing it from the general laws of human nature, using the facts of history merely for verification. Such, accordingly, has been the conception of social science by many of those who have endeavoured to render it positive, particularly by the school of Bentham. M. Comte considers this as an error. We may, he says, draw from the universal laws of human nature some conclusions (though even these, we think, rather precarious) concerning the very earliest stages of human progress, of which there are either no, or very imperfect, historical records. But as society proceeds in its development, its phenomena are determined, more and more, not by the simple tendencies of universal human nature, but by the accumulated influence of past generations over the present. The human beings themselves, on the laws of whose nature the facts of history depend, are not abstract or universal but historical human beings, already shaped, and made what they are, by human society. This being the case, no powers of deduction could enable any one, starting from the mere conception of the Being Man, placed in a world such as the earth may have been before the commencement of human agency, to predict and calculate the phenomena of his development such as they have in fact proved. If the facts of history, empirically considered, had

not given rise to any generalizations, a deductive study of history could never have reached higher than more or less plausible conjecture. By good fortune (for the case might easily have been otherwise) the history of our species, looked at as a comprehensive whole, does exhibit a determinate course, a certain order of development: though history alone cannot prove this to be a necessary law, as distinguished from a temporary accident. Here, therefore, begins the office of Biology (or, as we should say, of Psychology) in the social science. The universal laws of human nature are part of the data of sociology, but in using them we must reverse the method of the deductive physical sciences: for while, in these, specific experience commonly serves to verify laws arrived at by deduction, in sociology it is specific experience which suggests the laws, and deduction which verifies them. If a sociological theory, collected from historical evidence, contradicts the established general laws of human nature; if (to use M. Comte's instances) it implies, in the mass of mankind, any very decided natural bent, either in a good or in a bad direction; if it supposes that the reason, in average human beings, predominates over the desires, or the disinterested desires over the personal; we may know that history has been misinterpreted, and that the theory is false. On the other hand, if laws of social phenomena, empirically generalized from history, can when once suggested be affiliated to the known laws of human nature; if the direction actually taken by the developments and changes of human society, can be seen to be such as the properties of man and of his dwelling-place made antecedently probable, the empirical generalizations are raised into positive laws, and Sociology becomes a science.

‘Much has been said and written for centuries past, by the practical or empirical school of politicians, in condemnation of theories founded on principles of human nature, without an historical basis; and the theorists, in their turn, have successfully retaliated on the practicalists. But we know not any thinker who, before M. Comte, had penetrated to the

philosophy of the matter, and placed the necessity of historical studies as the foundation of sociological speculation on the true footing. From this time any political thinker who fancies himself able to dispense with a connected view of the great facts of history, as a chain of causes and effects, must be regarded as below the level of the age; while the vulgar mode of using history, by looking in it for parallel cases, as if any cases were parallel, or as if a single instance, or even many instances not compared and analysed, could reveal a law, will be more than ever, and irrevocably, discredited.

'The inversion of the ordinary relation between Deduction and Induction is not the only point in which, according to M. Comte, the Method proper to Sociology differs from that of the sciences of inorganic nature. The common order of science proceeds from the details to the whole. The method of Sociology should proceed from the whole to the details. There is no universal principle for the order of study, but that of proceeding from the known to the unknown; finding our way to the facts at whatever point is most open to our observation. In the phenomena of the social state, the collective phenomenon is more accessible to us than the parts of which it is composed. This is already, in a great degree, true of the mere animal body. It is essential to the idea of an organism, and it is even more true of the social organism than of the individual. The state of every part of the social whole at any time is intimately connected with the contemporaneous state of all the others. Religious belief, philosophy, science, the fine arts, the industrial arts, commerce, navigation, government, all are in close mutual dependence on one another, insomuch that when any considerable change takes place in one, we may know that a parallel change in all the others has preceded or will follow it. The progress of society from one general state to another is not an aggregate of partial changes, but the product of a single impulse, acting through all the partial agencies, and can therefore be most easily traced by studying them together. Could it even be detected in them separately, its true nature could not be un-

derstood except by examining them in the *ensemble*. In constructing, therefore, a theory of society, all the different aspects of the social organization must be taken into consideration at once.'

* * * * *

'There is one more point in the general philosophy of sociology requiring notice. Social phenomena, like all others, present two aspects, the statical, and the dynamical; the phenomena of equilibrium, and those of motion. The statical aspect is that of the laws of social existence, considered abstractedly from progress, and confined to what is common to the progressive and the stationary state. The dynamical aspect is that of social progress. The statics of society is the study of the conditions of existence and permanence of the social state. The dynamics studies the laws of its evolution. The first is the theory of the *consensus*, or interdependence of social phenomena. The second is the theory of their filiation.

'The first division M. Comte, in his great work, treats in a much more summary manner than the second; and it forms, to our thinking, the weakest part of the treatise. He can hardly have seemed even to himself to have originated, in the statics of society, anything new,* unless his revival of the Catholic idea of a Spiritual Power may be so considered. The remainder, with the exception of detached thoughts, in which even his feeblest productions are always rich, is trite, while in our judgment far from being always true.'

Passing from the consideration of Social Statics to Social Dynamics, Mr. Mill continues:

'Two questions meet us at the outset: Is there a natural evolution in human affairs? and is that evolution an im-

* 'Indeed his claim to be the creator of Sociology does not extend to this branch of the science; on the contrary, he, in a subsequent work, expressly declares that the real founder of it was Aristotle, by whom the theory of the conditions of social existence was carried as far towards perfection as was possible in the absence of any theory of Progress. Without going quite this length, we think it hardly possible to appreciate too highly the merit of those early efforts, beyond which little progress had been made, until a very recent period, either in ethical or in political science.'

provement? M. Comte resolves them both in the affirmative by the same answer. The natural progress of society consists in the growth of our human attributes, comparatively to our animal and our purely organic ones: the progress of our humanity towards an ascendancy over our animality, ever more nearly approached though incapable of being completely realized. This is the character and tendency of human development, or of what is called civilization; and the obligation of seconding this movement—of working in the direction of it—is the nearest approach which M. Comte makes in this treatise to a general principle or standard of morality.

‘But as our more eminent, and peculiarly human, faculties are of various orders, moral, intellectual, and æsthetic, the question presents itself, is there any one of these whose development is the predominant agency in the evolution of our species? According to M. Comte, the main agent in the progress of mankind is their intellectual development. Not because the intellectual is the most powerful part of our nature, for, limited to its inherent strength, it is one of the weakest: but because it is the guiding part, and acts not with its own strength alone, but with the united force of all parts of our nature which it can draw after it. In a social state the feelings and propensities cannot act with their full power, in a determinate direction, unless the speculative intellect places itself at their head. The passions are, in the individual man, a more energetic power than a mere intellectual conviction; but the passions tend to divide, not to unite, mankind: it is only by a common belief that passions are brought to work together, and become a collective force instead of forces neutralizing one another. Our intelligence is first awakened by the stimulus of our animal wants and of our stronger and coarser desires; and these for a long time almost exclusively determine the direction in which our intelligence shall work: but once roused to activity, it assumes more and more the management of the operations of which stronger impulses are the prompters, and constrains them to follow its lead, not by its own strength, but because

in the play of antagonistic forces, the path it points out is (in scientific phraseology) the direction of least resistance. Personal interests and feelings, in the social state, can only obtain the maximum of satisfaction by means of co-operation, and the necessary condition of co-operation is a common belief. All human society, consequently, is grounded on a system of fundamental opinions, which only the speculative faculty can provide, and which, when provided, directs our other impulses in their mode of seeking their gratification. And hence the history of opinions, and of the speculative faculty, has always been the leading element in the history of mankind.’

Here we come upon the famous *loi des trois états* which has been received with great opposition from theologians and metaphysicians, whose modes of thought it sets aside as unfit for modern use; nor has it received an open welcome from men of science, whom, at first sight, it would seem most to flatter. The opposition of all the teachers now living, though it would retard, could not ultimately prevent, the reception of a law. If, therefore, Comte has really discovered a law—as many of us firmly believe—its acceptance is only a question of time. I merely note two general sources of the opposition of scientific men, both of them evils of our present condition to which Comte has frequently called attention: first, the *speciality* of most men of science, and the absence of large philosophical or general views; secondly, the patchwork of opinion commonly held by them is formed of loose floating notions of metaphysics side by side with theological dogmas and inductive generalisations, so that many a mind which has discarded theological and metaphysical explanations of physical and even biological phenomena, readmits them into Psychology or Sociology. To these causes of opposition must also be added the license men permit themselves of pronouncing confidently on questions they have not taken the preliminary trouble of understanding. Two-thirds of the objections urged against this law of the three stages are based on a radical misapprehension

of it; and there is something quite comic in the gravity with which these misconceptions are advanced. *Non ragioniam di lor.*

The law does not assert that at distinct historical periods men were successively in each of the three stages, that there was a time when a nation or even a tribe was exclusively theological, exclusively metaphysical, or exclusively positive; it asserts that every class of conceptions man frames respecting the world, himself, and society, must pass through three stages, with varying velocity under various social conditions, but in unvarying order. Any one individual mind, inheriting the results of preceding generations, may indeed commence its thinking on some special topic, without being forced to pass through the stages which its predecessors have passed through; but every class of conceptions must pass through the stages, and every individual mind must more or less rapidly, in the course of its evolution from infancy to maturity, pass through them. These necessary stages Comte names the theological, the metaphysical, and the positive. Mr. Mill suggests, as less ambiguous, the terms volitional, abstractional, and experiential. The first is the spontaneous and primitive condition of thought; the second is a transition to the third, which is final.

All men are agreed, in these days, that real knowledge must be founded on observation. But no science could have its origin in simple observation alone; for if, on the one hand, all theories must be founded on observation, on the other, it is equally necessary to have some sort of theory before we address ourselves to the task of steady observation. If, in contemplating phenomena, we do not connect them by some principle, it would not only be impossible for us to combine our isolated observations, and consequently to draw any benefit from them; but we should also be unable even to retain them, and most frequently the important facts would remain unperceived. We are consequently forced to theorise. A theory is necessary to observation, and a correct theory to correct observation.

This double necessity imposed upon the mind—of observation for the formation of a theory, and of a theory for the practice of observation—would have caused it to move in a circle if nature had not fortunately provided an outlet in the spontaneous activity of the mind. Owing to this activity, it begins by assuming a cause, which it seeks outside the phenomena, i.e. a supernatural cause. As man is conscious that he acts according as he wills so he naturally concludes that everything acts in accordance with some will.

The spontaneous tendency is to animate the external world, because, since knowledge can only proceed from what is already known, the analogies suggested by consciousness are inevitably the first explanations of cosmical phenomena. This is the state of Fetichism: a state still to be noticed among children and savages. It passes by insensible degrees into Polytheism, and that again by a supreme effort of abstraction is replaced by Monotheism.

The second, or metaphysical, stage was a transition from this primitive to the final stage of positivism. It replaced the supernatural agent of the theological conception by a natural agent inherent in the objects themselves. It replaced the variable action of a *will* for the invariable action of an *essential cause*. In lieu of deities, it imagined entities.

Criticism subsequently discovered that these entities were simply personified abstractions. They then fell into such discredit that nowadays there may be some difficulty in comprehending how men of keen and meditative intellects could ever have mistaken abstractions for real existences capable of causing all the changes observed; yet nothing is more certain, and this History has exhibited abundant examples of it. Not only so, but many moderns who find it difficult to conceive that the great minds of the past could so far confound the names they gave to certain classes of facts with the essential causes of the facts themselves—could rely on an explanation which was in truth only a restatement of the facts to be explained—could passionately maintain that over and above the existing

animals, which they saw, there existed an universal Animal, which they did not see, and that this Animal was the reality of which the individual animals were the passing shadows—many moderns who find this difficult to conceive are themselves so wedded to similar abstractions (that of a Vital Principle, for example) that they despise you as 'shallow,' or declaim against you as 'materialistic,' if you think otherwise.

In the final, or positive, stage, the mind relinquishes attempts to penetrate to the essence of things, to transcend the sphere of Experience, and pass into that of causes, first or final. Its aim is to explain the *how*, and leave unexplored the *why*. It desires to establish by observation and induction the Laws, or constant relations, and resigns itself to ignorance of the Agents.

One illustration must suffice here.* Men formerly believed, according to Oersted, that Basilisks lived in cellars which had long been shut up; they were invisible, and whomsoever they looked upon died. This is a typical specimen of the theological mode of explanation. I am not aware what metaphysical one replaced it, but in the spirit of that method I will suggest the following: *Cellarity*, when long pent up, is inimical to Life. The positive explanation, seeking in the known properties of things, discovers a deleterious gas, whose weight causes it to accumulate in low places unless driven away by supplies of fresh air, and this gas is a poison to anyone who breathes it.

The theological system arrived at the highest perfection of which it is capable when it substituted the providential action of a single Being for the varied operations of the numerous divinities which had been before imagined. In the same way, in the last stage of the metaphysical system, men substitute one great Entity (Nature) as the cause of all phenomena instead of the multitude of Entities at first supposed. In the same way, again, the ultimate perfection of

* In my work on *Aristotle*, pp. 26-34, the law of the three stages is variously illustrated.

the positive system would be to represent all phenomena as particular aspects of a single general fact—and to this the molecular theory seems now rapidly tending.

After this brief indication of the law, we may resume Mr. Mill's exposition:—

'The passage of mankind through these stages, including the successive modifications of the theological conception by the rising influence of the other two, is, to M. Comte's mind, the most decisive fact in the evolution of humanity. Simultaneously, however, there has been going on throughout history a parallel movement in the purely temporal department of things, consisting of the gradual decline of the military mode of life (originally the chief occupation of all freemen) and its replacement by the industrial. M. Comte maintains that there is a necessary connexion and interdependence between this historical sequence and the other; and he easily shows that the progress of industry and that of positive science are correlative; man's power to modify the facts of nature evidently depending on the knowledge he has acquired of their laws. We do not think him equally successful in showing a natural connexion between the theological mode of thought and the military system of society: but since they both belong to the same age of the world—since each is, in itself, natural and inevitable, and they are together modified and together undermined by the same cause, the progress of science and industry, M. Comte is justified in considering them as linked together, and the movement by which mankind emerge from them as a single evolution.

'These propositions having been laid down as the first principles of social dynamics, M. Comte proceeds to verify and apply them by a connected view of universal history. This survey nearly fills two large volumes, above a third of the work, in all of which there is scarcely a sentence that does not add an idea. We regard it as by far his greatest achievement, except his review of the sciences, and in some respects more striking even than that. We wish it were

practicable in the compass of an essay like the present to give even a faint conception of the extraordinary merits of this historical analysis. It must be read to be appreciated. Whoever disbelieves that the philosophy of history can be made a science should suspend his judgment until he has read these volumes of M. Comte. We do not affirm that they would certainly change his opinion; but we would strongly advise him to give them a chance.'

It is now needful to consider whether Comte may rightfully be claimed as having created Social Science, or only, as Mr. Mill thinks, having rendered such a creation possible. To do this, we must first settle what is meant by the creation of a science. There is, I believe, only a difference in terms between Mr. Mill's position and my own; he would say that the defects in Comte's construction prevent it from being accepted as a science, though the route is opened for future investigators, and much of the country is mapped out. Admitting the defects to be as great as he supposes, though I think on some points a good defence may be made, I should only look on these *as* defects. No science is perfect, and the last and most complex of them all is, of course, the most defective of them all. What we have to consider is whether it is a science, and whether it is in such condition that, like all other sciences, it may indefinitely advance. We have seen that in the absence of Sociology the creation of the Positive Philosophy would have been impossible, since, then, *all* phenomena would not have been embraced; we have seen further that it was not only necessary that social phenomena should be included with cosmical phenomena in the Doctrine, but that these social phenomena should disclose their elementary laws, in other words, that Sociology should not only be a science but an Abstract Science. I will now endeavour to show that Comte transformed what before was Common Knowledge into Science, separated its elements from those of other sciences, and presented the Abstract Science of social existence claiming its place in the hierarchy.

Others before Comte, as Mr. Mill remarks, had a full

conviction that social phenomena conform to invariable laws, and by discarding all theological and metaphysical explanations had adopted the positive attitude. Granted; but the positive attitude is not enough for Science; and no one will venture to assert that Montesquieu, Macchiavelli, Adam Smith, Bentham, or the political economists, had discovered the fundamental laws which constitute the science. They had not even distinctly conceived how the science itself should be distributed into statical and dynamical laws, the statical derived from Biology, the dynamical from History. They made several empirical generalisations, valuable as such, but no attempt to organise these into a science.

The universal mistake of social speculators was an attempt to deduce the phenomena from the laws of 'human nature,' i.e. to make collective phenomena the simple consequences of laws of the individual. Setting aside the metaphysical conceptions which were thus made a basis of deduction, and assuming that the true biological laws had been discovered and applied, we should still perceive that failure was inevitable, because social laws are not directly reducible to Biology. As Comte in one of his earliest publications remarks on this very point:—

'Sans doute, les phénomènes collectifs de l'espèce humaine reconnaissent pour dernière cause, comme ses phénomènes individuels, la nature spéciale de son organisation. Mais l'état de la civilisation humaine à chaque génération ne dépend immédiatement que de celui de la génération précédente, et ne produit immédiatement que celui de la suivante. Il est possible de suivre, avec toute la précision suffisante, cet enchaînement à partir de l'origine, en ne liant d'une manière directe chaque terme qu'au précédent et au suivant. Il serait, au contraire, absolument au-dessus des forces de notre esprit de rattacher un terme quelconque de la série au point de départ primitif, en supprimant toutes les relations intermédiaires.'† The error is as great as that of a physiologist who should attempt to deduce the state of

* COMTE: *Politique Positive*, IV. *Appendice*, p. 126; comp. also the passages p. 98 and 130, 131.

manhood from that of infancy, without taking that of puberty into account.

Not only did Comte see how social phenomena were to be distributed and studied in order to form a science; he saw the decisive point of separation between these and other phenomena which rendered the constitution of a separate science necessary. Precisely as Physics must be separated from Mathematics, because no extension of mathematical laws alone will suffice to explain physical phenomena; precisely as Chemistry must be separated from Physics, because in chemical phenomena there is, over and above the physical laws, the addition of laws of molecular affinity; precisely as Biology must be separated from Chemistry and Physics, because by no extension of physical and chemical laws can we deduce the special laws of organic life: so in like manner must Sociology be separated from Biology, because, over and above the phenomena of human nature, exhibited in the species, there is the important series of phenomena due to the collective activities of the race. History modifies the race.

By this conception Sociology was rendered possible, but not by this alone was the science constituted. Had Comte done no more than this, he would have held an analogous position to that of a biologist whom, before Bichât, we will imagine to have conceived that Biology could be rescued from Theology and Metaphysics, and constituted as a science, if Life were reduced to the elementary properties inherent in organic tissues. Obviously this would only have been one step towards the solution of the problem; the next step would have presented immense difficulties; it would have been to determine specifically what those properties were which the several tissues specially manifested. In like manner, Comte, having conceived that the collective phenomena of History must be separated from the individual phenomena of Biology, and having withdrawn them from the *regency of volition*, to place them under the *regency of law*, showing that they depended on conditions inherent in the

successive stages of society, and not on providential interventions, first made a science of History possible, and next constituted it by discovering the fundamental law of evolution.

In order that the science should be constituted, the particular phenomena had to disclose their laws; and in order that it should be an Abstract Science, it was necessary that they should disclose their elementary laws. Otherwise we might have had a History of some particular people, but not a science of universal History, an Abstract Science, the laws of which would be rigorously applicable to all nations and all times, just as the laws of Biology are applicable in all climates and in all branches of the organic series.

Mr. Mill's statement of what constitutes a science is all that Comte's disciples require, namely, 'discovering or proving and pursuing to their consequences those of its truths which are fit to form the connecting links among the rest; truths which are to it what the law of gravitation is to astronomy, and what the elementary properties of tissues are to physiology.' And this we believe the law of the three stages is to Sociology. Mr. Mill accepts that law; and therefore it is that I venture to intimate that his doubts respecting Comte's claim may be mainly a question of terms. Those—and they are the majority—who refuse to accept the law may consistently reject the claim. I cannot here afford the space for a discussion of their objections, but content myself with saying that it is a law of History, and must be verified in History; it cannot even be comprehended, much less refuted, through subjective experience. Whoever will take the trouble to understand its meaning, and follow Comte's exemplification of it throughout History, will see how the superficial objections to it all disappear, as they disappear before the law of gravitation, which likewise needed an extensive and persistent verification before its truth became irresistible.

Having thus characterised the general aspects of the New Philosophy founded by Comte, I must refrain from any attempt to follow in detail what Mr. Mill justly calls 'that

wonderful systematisation of the philosophy of all the sciences, from mathematics to physiology, which, if he had done nothing else, would have stamped him in all minds competent to appreciate it, as one of the principal thinkers of the age.' There are portions, of course, which the advance of Science has rendered antiquated, and portions it has rendered unacceptable; but we shall seek in vain through the writings of his predecessors, even in special departments, for anything comparable to the solid and luminous exposition of the philosophy of each subject, and its position in human evolution. The student is advised to master and patiently meditate the successive chapters in which the philosophy of Mathematics, Physics, Chemistry, Biology, and Sociology, is expounded; and, thus fortified, he will be prepared to meet the objections which assail the Doctrine from various quarters. Meanwhile two points imperatively demand our attention, because they are urged by a positive thinker of the highest eminence, and because they assail the integrity of the Doctrine: these are, 1st, the absence of Psychology from the hierarchy of the sciences; 2ndly, the absence of a method of Proof. Without saying where he would admit these sciences, so as to reconstruct the hierarchy, Mr. Mill insists on their omission as a defect. I am the less inclined to undervalue the force of these objections because at one time I fully accepted the first, and still waver respecting the second.

When Mr. Mill says that Comte rejected psychological observation, properly so called, as an invalid process at least in regard to intellectual operations, and that 'he gives no place in his series to the science of Psychology, and always speaks of it with contempt,' there is both truth and error in the criticism. It is true that Comte did regard internal observation as an illusory process. This is a question of Method, on which I agree with Mr. Mill in thinking Comte greatly mistaken, owing to his contempt for the only psychological investigations he was acquainted with, and to his justifiable disregard of the pretended 'œil interne.' But it is not true that Comte discarded psychological observation; he only disclaimed for it a double organ, external with

regard to one class of facts, and internal with regard to another. However, it must be admitted that his ideas on this subject were not perhaps very clear, and that he had paid but little attention to the results of psychological analysis. Considering how very far professed psychologists are even yet from any definite and consistent Method, this is not a serious charge against him.

But when it is said that he gives no place to Psychology in his series, a question of Doctrine is raised, namely whether he was or was not justified in refusing to Psychology the position of an abstract and independent science? On this question I retract the adhesion which many years ago I gave to Mr. Mill's point of view, and pass over to that of Comte. It then seemed to me that on the principles of positive classification Psychology ought to be separated from Biology, just as Biology was separated from Chemistry; in each case the separation was necessitated by the *speciality* of the phenomena treated. I now see the erroneous appreciation which misled me. The confusion in my mind (let me not include others in the reproach) was the confusion of the subsidiary question of Method with the dominant question of Doctrine, and, as a consequence, an imperfect appreciation of biological phenomena. Thus because Comte was wrong respecting one of the means of psychological research (subjective analysis) and spoke with indiscriminating contempt of Psychology (meaning really nothing but the unscientific farrago about *le Moi*), and because I saw that Psychology was a possible science of great value, having a special instrument in Consciousness, I was led to dissent from him, and agree with Mr. Mill in claiming for it an independent position. Further meditation, however, disclosed that it is one thing to recognize Psychology as a science, another thing to assign it a place in the hierarchy of Abstract Sciences. It may be a Concrete Science, as Physiology and Botany are; but it is derived from the Abstract Science of Biology, and can only be consistently separated from it by those who hold that psychical phenomena are in essence distinct

from vital phenomena. What I had hastily classed as special in psychical phenomena was a conventional speciality, arising from the conventional restriction of biological phenomena, and the unphilosophic practice of biologists, who had left all the higher functions to be treated by metaphysicians. That this was a serious error a moment's consideration will disclose. Biology is the science of Life; among the manifestations of living organisms we distinguish, for our convenience, the vegetal from the animal functions, what are called vital from what are called psychical phenomena; but no biologist supposes that this distinction is real, that an animal organism has two independent vitalities, or that the psychical functions are not part and parcel of the organic activities, determined by the structure and condition of the organs; above all no biologist supposes that his science would be complete if from the circle of vital phenomena all the sensitive, emotive, volitional, instinctive, and intellectual phenomena were excluded. The parallel between Chemistry and Biology entirely fails. Chemistry deals with the phenomena of molecular combination; the phenomena of Life are superadded to these, and this superaddition constitutes a new science. The laws of Chemistry would remain precisely what they are if all organisms were destroyed: neither more nor less. But psychological phenomena are no superaddition to the phenomena of Life, they are themselves vital; and although we may conceive a Biology restricted to Plants, and comprising only vegetal functions, this withdrawal of animal organisms would profoundly affect the constitution of Biology, by robbing it of a class of important laws. In other words, since every general science of Life necessarily includes *sensitive* no less than *nutritive* functions, any conception of Biology which excluded the sensations, instincts, and intellections would be monstrously truncated.

Comte was therefore fully justified in refusing to truncate Biology by removing from it one important class of vital phenomena; he would have erred against his own principles had he erected the concrete, derivative science of Psychology

into an Abstract Science holding its place in the hierarchy. We may cheerfully give up his views as to how Psychology should be studied, without giving up an essential element in the Positive Philosophy—without creating a place for Psychology independent of, and equivalent to, Biology. We cannot forget that all psychical phenomena are phenomena of Sensibility, and are reducible to neural processes, actions of the organism.

There is, indeed, a Philosophy which takes a very different view, teaching that sensation, emotion, ideation, are not directly functions of an organism, but are the activities of an entity living within the organism, a life within a life, having, with the organism it inhabits, only points of contact, none of community. I will not here discuss the pretensions of this Philosophy; I only say it is not the Positive Philosophy. The answer to Mr. Mill may therefore be summed up thus: either psychical phenomena are biological phenomena, in which case Psychology is a branch of Biology; or psychical phenomena are essentially different from biological phenomena—the special actions of a special agent or combination of agents—in which case Psychology claims a separate place among fundamental sciences.

Dr. Bridges,* in his letter to Mr. Mill, after noticing the restricted sense in which Comte spoke of Psychology, adds, 'If by Psychology be meant the study, by every means that are available, of the moral and intellectual functions of man, it is very certain that Comte was a psychologist, though he naturally avoided a word which connected him with a contemporary school of metaphysicians. With regard to the impossibility of studying the purely intellectual functions by the method of self-observation, Comte adopted, it is true, the opinion of Broussais so vigorously stated in his treatise *sur l'Irritation et la Folie*. It is possible that these thinkers may have rejected the method too absolutely. But it must be shown to be far more fruitful in results than it has yet

* *The Unity of Comte's Life and Doctrine: A Reply to Strictures on Comte's later Writings, addressed to J. S. Mill, Esq., M.P.* By J. H. BRIDGES, M.D. 1866.

proved, before it can rank very high as an instrument for the discovery of truth. The study of the intellectual and moral functions was prosecuted by Comte throughout his life, and that on methods not, I imagine, materially different from those which you would adopt.'

M. Littré grapples more directly with Mr. Mill's objection. He begins with an important distinction between the study of the faculties and the study of the products of those faculties. 'According to Comte there is no Psychology beyond the domain of Biology; according to Mr. Mill, Psychology forms an ensemble of notions which cannot be explained by Biology. What shall I say to this, when at the outset I remark a confusion, which I must clear up before pronouncing? The confusion is that the word Psychology sometimes comprehends the cerebral faculties and sometimes the products of those faculties. If the question is of the faculties, I side with M. Comte; if the question is of the products, I side with Mr. Mill.' He proceeds to show that whatever relates to the faculties, either as to their analysis or to their classification, everything which relates to the functions, or the modifications impressed on them by external influences, belongs of right to Biology; and as such it is treated by Comte. The fact that there is a Psychology of animals decisively refutes the notion of the independence of this study of the faculties; the intelligence, affections, and instincts of animals being clearly biological questions.

'These explanations,' he adds, 'show that M. Comte committed no error in placing under Biology the study of Psychology, if by the latter we understand the intellectual and affective faculties; but if we also understand by it Ideology, and even Logic, then the reproach has quite another aspect.' M. Littré selects as an illustration of the distinction between faculties and products, the case of Language. Recent researches, he says, have given almost a demonstration of the existence of such a faculty in one of the anterior convolutions of the cerebrum. 'That is a decisive case of cerebral physiology—a definite function

assigned to a definite organ; but if the faculty of Language belongs to Biology, this cannot be said of Grammar, which is a product of the faculty.' Other examples might have been added. The faculty, or faculties, of Music belong to Biology, but counterpoint has no such place. Ideology, Logic, Ethics, Æsthetics, are products, and, as products, have no place in the series of Abstract Sciences which constitute the positive hierarchy, though one and all of them may be very important special sciences. '*Leur théorie générale n'est pas plus partie intégrante de la philosophie positive que ne le serait la théorie générale du langage et de la grammaire, et vraiment pourquoi ne pas réclamer en faveur de celle-ci, fort considérable assurément, si l'on réclame en faveur de celles-là.*'

We will now turn to the second objection. 'The philosophy of a science,' says Mr. Mill, 'consists of two principal parts; the methods of investigation and the requisites of proof.' I pause here to remark that although he is at perfect liberty to construct his own definitions, and conform to them, he is not at liberty to make them the standard for Comte, and to object to the Positive Philosophy because it does not conform to such a standard. As a critic of a system, he is bound to accept its definitions, not to apply his own. In the present instance, a positivist would say that Mr. Mill's definition is one which describes the logic, not the philosophy, of a science. I do not remember any express definition proposed by Comte, but the following is the one I should construct from his exposition: 'The philosophy of a science is constituted by the co-ordination of the fundamental Laws of the phenomena within the domain of the science—the Methods by which those Laws are discovered,—and the relation which the science bears to the one which precedes and the one which succeeds it in the encyclopædic hierarchy; in other words, its position and degree of influence in human development.'*

* M. LITTRÉ proposes the following:—'*La philosophie d'une science est la conception de cette science par co-ordination des faits généraux ou vérités fondamen-*

This difference of definition being indicated, we may consider what force there is in the objection urged by Mr. Mill. He sees two requisites:—‘The one,’ he continues, ‘points out the road by which the human intellect arrives at conclusions; the other, the mode of testing their evidence. The former, if complete, would be an Organon of Discovery; the latter, of Proof. It is to the first of these that M. Comte principally confines himself, and he treats it with a degree of perfection hitherto unrivalled. Nowhere is there anything comparable in its kind to his survey of the resources which the mind has at its disposal for investigating the laws of phenomena; the circumstances which render each of the fundamental modes of exploration suitable or unsuitable to each class of phenomena; the extensions and transformations which the process of investigation has to undergo in adapting itself to each new province of the field of study; and the especial gifts with which every one of the fundamental sciences enriches the method of positive inquiry, each science, in its turn, being the best fitted to bring to perfection one process or another. These and many other cognate subjects, such as the theory of Classification and the proper use of scientific Hypotheses, M. Comte has treated with a completeness of insight which leaves little to be desired.’

The praise is emphatic enough, and authoritative enough, to satisfy even disciples, but it is succeeded by the statement of a grave defect. ‘We are taught the right way of searching for results, but when a result has been reached, how shall we know that it is true? How assure ourselves that the process has been performed correctly, and that our premises, whether consisting of generalities or of particular facts, really prove the conclusion we have grounded on them? On this question M. Comte throws no light; he supplies no test of proof. As regards deduction, he neither recognises the syllogistic system of Aristotle and his successors—the insufficiency of which is as evident as its utility is real—nor proposes any other in lieu of it; and of inductions he has no canons whatever. He does

tales qui y appartiennent.’—*Revue des Deux Mondes*. (This article has since been reprinted as a pamphlet: *Auguste Comte et Stuart Mill*.)

not seem to admit the possibility of any general criterion, by which to decide whether a given inductive inference is correct or not. He maintains that no hypothesis is legitimate, unless it is susceptible of verification, and that none ought to be accepted as true, unless it can be shown not only that it accords with the facts, but that its falsehood would be inconsistent with them. He, therefore, needs a test of inductive proof; and, in assigning none, he seems to give up as impracticable the main problem of Logic, properly so called.’

The objection is formidable; if admitted, it would be fatal,—a system which was without a criterion would have the radical vice which dissolves every metaphysical construction. Happily this is not the case with the Positive Philosophy. A deficiency, I admit, exists, but it is not one having the reach assigned to it by Mr. Mill. A system of Philosophy must somewhere have a place for Logic, and Comte has not indicated the place it should occupy. But the omission does not deprive the system of a criterion; it only deprives us of a ready mode of exhibiting the criterion. Logic is the codification of the rules which the various sciences have employed and must employ. It is the grammar of science. The author of incomparably the best work on Logic is naturally alive to the importance of this codification; and we who have profited so largely by the work, are not likely to underrate it. Nevertheless, when the integrity of Positivism is in question there is doubt permissible whether the plan followed by Comte does not, as M. Littré suggests, furnish an equivalent to the legal sanction of Logic. Mr. Mill thinks not; but that may be because he misapprehends the plan:—He says, ‘Method, according to M. Comte, is learnt only by seeing it in operation, and the logic of a science can only be usefully taught through the science itself.’ The plan is wider; it is the combination of the hierarchy of the sciences with their methods, so that each science in turn furnishes its own criterion; thus the logic of each science is serially exhibited, and all that is wanting is the codification of the whole, an abstract science of Proof.

If Logic is the codification of the rules of experience, its utility as codification may be admitted. But the code does not introduce any new validity. It shows what the rules are; it does not furnish a test deeper than the rules themselves. Comte was not imperatively called upon to supply a test of truth more valid than experience; nor could Logic have supplied such a test. Mr. Mill declares that the final test is the universality of the law of causation. But no one has shown more conclusively that the law of causation is itself a generalisation of experience. M. Littré, therefore, asks, 'How do we know that a general proposition in science is true? By showing that in every case experience confirms it. If exceptions arise, we either sacrifice it or modify it. Our most assured inductions are only accepted under the control of constant verification, and no sanction which Logic can give them removes this relative character or adds anything to their certainty.'

Although Comte neglected to codify the rules of Proof (a neglect which has been amply remedied by Mr. Mill), he did not by any means or in any department neglect Proof. He gave the rules in giving the Methods of Research; and in this portion of the philosophy of each science he elaborated the logic peculiar to that science. As he says, 'Le vrai régime positif ne sépare jamais la logique de la science. Car en n'étudiant chaque partie de la méthode inductive qu'avec les doctrines qui l'ont spécialement suscitée, on sent aussitôt que son usage doit toujours être conforme aux notions fondamentales que cette science reçoit de la précédente.'*

While defending Comte, I have also to add that although Logic is to Science what Grammar is to Language, and both should be taught *pari passu* with their examples, there is still a need for a general Logic or Methodology, as for an Universal Grammar or Philosophy of Language; and this need Comte sometimes seems to have felt. 'Puisqu'il est toujours absurde,' he says, 'd'enseigner la méthode séparément de la

* *Politique Positive*, i. 518.

doctrine, il faut utiliser toutes les occasions où l'on peut tirer de l'exercice scientifique une saine instruction logique.'* But where this Methodology should be placed, whether as an Abstract Science at the close of the series, or as a division of Anthropology, he has left for others to determine.

This, then, is the Positive Philosophy: the extension to all investigations of those methods which have been proved successful in the physical sciences—the transformation of Science into Philosophy—the condensation of all knowledge into a homogeneous body of Doctrine, capable of supplying a Faith and consequently a Polity.

The positive mode of thought is that which must rule the future. This is an induction from all History, which shows that only three modes have existed, and that they have everywhere exhibited the same law of mutation, the theological once dominant being gradually supplanted by the metaphysical, and the metaphysical in turn gradually giving way to the positive. One by one the various groups of phenomena have fallen under the positive rule, and as each group received its scientific character it freed itself more and more from the influence of Theology or Metaphysics, the perfection of each science being accurately measured by the completeness with which these influences have been eliminated.

But although the course of History unequivocally consecrates the Positive Philosophy, and although we see in the ever accelerated advances of Science the accumulative preparations for the new Doctrine, we must not confound the general spirit with the special result. We may accept the positive spirit, and all the positive sciences, without accepting the Philosophy which Comte has evolved from them. I myself accept that Philosophy, and I do not know of any other general Doctrine which is to be placed beside it. But there are many positive thinkers who either do not feel the need of a Doctrine, or do not see how at present it is to be constructed; men who

* *Politique Positive*, ii. 443.

think that the several sciences are enough, without a general Philosophy to knit them together; and men who are dissatisfied with Comte's synthesis, though unable to propose a better. Thus it is that there is still a vast mass of unorganised positivism which the future will have to organise. What may be said at once of the Philosophy is that it is a systematization, more or less perfect, of actual knowledge, a general doctrine capable of embracing all knowledge. This is its distinctive character. 'Tant qu'Auguste Comte n'a pas paru,' says M. Littré, 'le champ de la spéculation générale appartient à la théologie ou à la métaphysique, et celui de la spéculation particulière à la science. Quand il a paru, les positions sont interverties; la spéculation scientifique devient générale, et la théologie et la métaphysique deviennent particulières, c'est-à-dire, qu'elles ne se montrent que comme des étages de l'histoire de l'esprit humain.'*

More than once the phrase 'systematization of all knowledge' has been used, and designedly, for the province of Positivism is strictly limited to what can be known; and it is this very circumscription which has provoked the deepest antagonism. Affirming that since we cannot *know* the origins and ends of things—first and final causes being, from the constitution of our faculties, inaccessible to us—we ought stringently to exclude them from our Philosophy, which is concerned solely with what can be known, Positivism by no means denies the existence of such causes, it simply denies that by invoking them we can gain any insight into the laws of phenomena. Neither affirming nor denying their existence, it contents itself with asserting that they have not been made cognisable to our minds; and although it is permissible to every man to indulge in any phantasies he pleases, it is not permissible to introduce these into Philosophy. It is no use asking for better bread than can be made of wheat. The limitations of human knowledge may be irksome to some impatient spirits—and are usually so to those who have not had patience enough to master much of

* LITTRÉ: *Auguste Comte*, p. 99.

what *is* known—but Philosophy pretending to no wider sweep than that of human faculty, and contented with the certainties of experience, declares the search after first and final causes to be a profitless pursuit.

§ III. TRANSFORMATION OF PHILOSOPHY INTO RELIGION.

It is neither consistent with the plan of this History, nor with the few pages still at my disposal, to give an exposition of the speculations which Comte produced during his second period. That his Philosophy rapidly became transformed into Religion, has already been noticed; also that the transformation caused a schism among his disciples, one party affirming that he had forsaken the positive Method, and was untrue to his own teaching; the other party affirming that the later developments were perfectly consistent with the earlier speculations, and that his whole life had been the one work of founding a Polity on the basis of a demonstrated Faith.*

The later works, namely the *Politique*, the *Catéchisme*, and the *Synthèse Subjective*, form a group by themselves, which, whether they are, or are not, necessary developments of the Philosophy, in nowise affect the integrity of that system of thought; a system that may be accepted by those who do not feel the need of the Religion, and by those who do not think that Comte has succeeded in the transformation. There are thus two separable doctrines associated with his name; the fervent adherents of the one being sometimes only partial adherents of the other, and sometimes even its open antagonists.

Such questions must be debated elsewhere. For myself I will only say that in spite of my veneration for Comte, and my growing sympathy with his views, I have never been able to accept the later works as more than magnificent efforts to construct an Utopia, which differs from all previous Utopias in having the past life of Humanity as its warrant.

* See LITTRÉ's work on Comte, and Dr. BRIDGES' *Letter to J. S. Mill*.

I think his attempt at systematization was premature: failure was inevitable, because politics must grow, they cannot be made—and by him the laws of growth were disregarded. The Method he employed is one which the Positive Philosophy emphatically condemns; and his large use of subjective fiction, permissible in an Utopia, is disastrous elsewhere. On these grounds of Method and premature systematization, I am forced to separate myself from him, to question some doctrines and reject others, which if they were put forth merely as suggestions might be fertile in influence. Generally it may be said of these later works that had they been avowed as Utopian—as the visions and suggestions of a meditative mind anxious to impart to others the thoughts which rose in it—their immediate operation would have been incomparably greater, because their profoundly moral and ennobling spirit, and their reach of suggestion, would have gained the sympathy of many who are roused to antagonism by what they consider the arrogance of a claim to finality, and the danger of an attempt at practical enforcement of ideas not rationally sifted. It is one thing to listen to a philosophic proposal, to carry it in our thoughts and see how far it will clear up difficulties, how far it is or is not compatible with experience; another thing to listen to a preacher who propounds his visions as laws. As a great teacher, Comte's simple indications would have been received with the respect which was their due. As a pontiff, he forced us to scrutinize severely the validity of every proposition he put forth. We could all admit the deep importance of his efforts to exalt every demonstrated truth into an element of Religion, making all studies religious by disclosing their higher aim, so that even Mathematics might become a part of Morality; we could see that he was thus calling on us to do consciously what from the first mankind has been doing unconsciously, namely, to make every insight into the truth of things a rule of conduct. But the very principle here in operation teaches a cautious reserve. We must be thoroughly convinced of a truth before we erect it into a

rule of conduct. Now it is certain that many of Comte's ideas, even on fundamental questions, are very far from having the evidence requisite for conviction; and however grateful we may be to him for his suggestions, we are by no means ready to regard them as laws.

Thus much it was needful to say respecting the attitude of many who on the whole regard Comte's later speculations with sympathy, as the efforts of an individual to anticipate the work of future generations. The history of his ideas he has narrated in the preface to the first volume of the *Politique*; and although it may be somewhat coloured by the after glow, its substantial truth will be recognized by all who read his early essays, or meditate the first and final chapters of the *Philosophie*. Nothing can be more evident than that from the first his aim was to construct a Polity on the basis of Science. This Polity did not at first wear the aspect of a Religion, but the transition was inevitable. A Doctrine which furnished an explanation of the world, of man, and of society, which renovated education, and organized social relations, above all which established a Spiritual Power, was in all its chief functions identical with a Religion. 'Les positivistes sont aujourd'hui,' he said, 'les seuls qui, plaçant le problème spirituel avant la recherche temporelle, fondent la réorganisation industrielle sur la rénovation intellectuelle et morale. Tous les autres réformateurs s'accordent au contraire à régler immédiatement la société matérielle sans avoir aucunement discipliné les opinions et les mœurs.' The discipline of opinion is to be effected by the Philosophy which furnishes a common Faith, in furnishing a homogeneous explanation of the external order of existences; the discipline of conduct is to be effected by a religious conception of our duties. This conception of our duties naturally emerges from a consideration of the laws of social evolution, since 'l'avenir que nous voulons préparer résulte essentiellement d'un passé que nous ne pouvons changer.'

The Positive Religion claims to resume and complete all previous Religions, just as the Positive Philosophy resumes and

completes all previous Philosophies. It resembles them in purpose, it differs from them in having a basis of demonstrated truth. Widely as the various creeds may be separated, they are essentially combined by Positivism, which considers each in reference to its local and temporary destination, as the expression of one stage of human evolution. 'Il n'existe au fond qu'une seule religion à la fois universelle et définitive, vers laquelle tendirent de plus en plus les synthèses partielles et provisoires, autant que le comportaient les situations correspondantes.' No sooner was the religion of Humanity distinctly conceived than the history of Religion seemed suddenly illuminated, as the story of one aim becoming more and more definite: everywhere the same tendency was observable: everywhere the ideal of *human* nature usurping more and more of the province primitively assigned to supernatural powers: the gods, always exaggerations of human powers and passions, became more and more personifications of what was most admirable and loveable in human nature, till, in Christianity, there emerged the avowed Ideal Man.

It is therefore an ungenerous and misplaced reproach so often sneeringly cast upon Comte that he has enriched his religion by incorporating largely the elements of Christianity. It is because Christianity was the highest and latest development of religious thought, and because it brought into preeminence the human element contained in all religions, that it was the effectual preparation for a religion of Humanity. Comte therefore, whose aim it was to extricate from the whole past experience of the race whatever was in harmony with the development of our higher nature, could not but largely incorporate Christian teaching in his own synthesis. And thus it is that apart from certain metaphysical doctrines—very lightly held by most minds—there is little in the conceptions of the most enlightened Christian which is not identical with Positivism; or, conversely, there is little in Positivism which Christians do not or cannot cordially accept in all that relates to this life. The main

distinction lies in this, that Positivism leaves less influence to the avowedly selfish motives.

Unhappily Comte did not confine himself to preaching a noble moral doctrine, but irritated his antagonists and perplexed his admirers by a variety of particular prescriptions, which gratified his love of systematization. These are regarded as absurd or worse; and the public, ever ready to fasten upon details and to neglect essentials, quarrel over these particular prescriptions, declaim against them, and laugh at them, as if the Religion of Humanity meant nothing more. It is the spectacle constantly before our eyes: in the squabbles about Ritualism men forget that they are Christians.

Two things every Religion must do if it is to endure: it must satisfy the intellect, and regulate the feelings. To satisfy the intellect, it must furnish an explanation of the world and society such as enables us to understand, and by understanding to modify, the External Order to which our existence is subordinate. To regulate the feelings it must furnish an explanation of man, such as enables us to understand, and by understanding adapt ourselves to the Internal Order which constitutes the moral life. How far Positivism at present answers to such demands is a matter for debate. That it claims to answer them is enough to arrest serious attention. So much is clear: that whenever the present intellectual anarchy is replaced by a common Faith, whenever men have a system of beliefs respecting the universe and their relation to it, which resting on demonstration admits of no dispute, then—alas! the prospect seems far distant—will arise a Polity which also will admit of no dissent. Then will Philosophy be transformed into Religion.

Meanwhile anarchy continues, and the Faith is slow in spreading.

CONCLUSION.

HITHERTO the History of Philosophy has been that of a long period of preparation. A new era dawns with the transformation of Science into Philosophy. Henceforward History will record development, not revolution—convergence of effort, not conflict. Each science has had its period of preparation, during which knowledge was accumulated, but no presiding conceptions gave unity to researches, no fixed methods enabled all men to assist in building one temple. Then came the change: each science was ‘constituted,’ separated from Common Knowledge, and the efforts of all labourers were convergent, the development was continuous. The constitution of the Positive Philosophy closes the period of preparation, and opens the period of evolution. It is far, very far from complete as a Doctrine. It will have to undergo many enlargements and modifications, advancing with the progress of discovery, and adapting itself flexibly to all the changes of scientific knowledge. But while it will thus need and will absorb the labours of future generations, it will continue in the same path, undisturbed by conflicts of principles.

This prophecy is not made in forgetfulness of the fact that at present the doctrine has no very extensive acceptance, and that even positive thinkers are not always willing to accept it. Hipparchus and Bichât found lukewarm adherents among the astronomers and biologists of their day, and fierce antagonists among the philosophers; but the rolling years brought light into men’s minds; and the Positive Philosophy will force its way to empire, in spite of sceptics and opponents. It must do so, because its only rivals are Theological Philosophy and

Metaphysical Philosophy, and these, after a long reign, have irretrievably lost their supremacy in every department where they have been confronted with Science. No sooner was this victorious Science transformed into a Philosophy than the rivalry was virtually at an end. Thus, although Comte may come to be as antiquated as Hipparchus, and as far behind the knowledge of the day as Bichât now is, the Positive Philosophy will henceforth reign undisturbed.

In the story which these pages have told, there has been something like a demonstration of the incompetence of the Method upon which all metaphysical inquiries proceed. The urgent need of the Positive Philosophy was thus made apparent. If the past points to the necessity for a homogeneous and all-embracing Doctrine, what indications are there in the present of a speedy realisation of that aim? To answer this question, a volume might profitably be employed. In the few pages still at command, I can only briefly touch on it.

In France, at first sight, the signs seem unfavourable, since what little speculative activity exists there (out of Science) is markedly opposed to the positive spirit. The reaction against the 18th century still continues, and ‘Materialism’ is still the bugbear erected to warn men away from positive tendencies. In Germany, on the other hand, the old spiritualism is daily falling into discredit, and what are called materialistic opinions are rising into popularity. Nay, even in England there is no mistaking the strong current towards positive ideas, in spite of our theological impatience of whatever can be stigmatised as Materialism.

Materialism is an ugly word, which *connotes* certain opinions of very questionable validity held by some writers, and opinions both silly and immoral which are wantonly *attributed* to these writers by rash and reckless polemicists. Be their opinions, however, what they may, the materialists have at least this important advantage, that they strive to get rid of all metaphysical entities, and seek an explanation of phenomena in the laws of phenomena. Their doctrine

may be, as I think it is, truncated and imperfect; words and vague generalities are too often made to supply the place of distinct conceptions; but the opinions should be refuted as false, not denounced as dangerous. Research is arduous enough without our obstructing the path with bugbears. If materialistic opinions are erroneous, they are dangerous to the extent of their erroneousness; whereas most men declare these opinions to be erroneous because they believe them to be dangerous. Against this mode of warfare philosophers are bound to protest. It is an effective mode, and therefore should be condemned. Men may, unhappily, be frightened from the truth and cajoled into error;* and in France the cajolery has been openly avowed, Victor Cousin frankly appealing to the 'patriotism' of his audience in favour of 'nos belles doctrines.'

The reaction against the Philosophy of the Eighteenth Century was less a reaction against a doctrine proved to be incompetent than against a doctrine believed to be the source of frightful immorality. The reaction was vigorous, because it was animated by the horror which agitated Europe at the excesses of the French Revolution. Associated in men's minds with the saturnalia of the Terror, the philosophical opinions of Condillac, Diderot, and Cabanis were held responsible for the crimes of the Convention; and what might be true in those opinions was flung aside with what was false, without discrimination, without analysis, in fierce impetuous disgust. Every opinion which had what was called 'a taint of materialism,' or seemed to point in that direction, was denounced as an opinion necessarily leading to the destruction of all Religion, Morality, and Government.

* M. TAINE, in one of his vivacious sallies notices the small importance the public attaches to pure reasoning: 'Attaquez une psychologie par une psychologie; vous convaincrez quatre ou cinq esprits solitaires, mais la foule vous échappera. Au contraire, proclamez bien haut que si l'on continue à croire vos adversaires, Dieu, la vérité, la morale publique sont en danger: aussitôt l'auditoire dressera les oreilles: les propriétaires s'inquiéteront pour leur bien, les fonctionnaires pour leur place; on regardera les philosophes dénoncés avec défiance; par provision on ôtera leur livre des mains des enfants; le père de famille ne laissera plus manier à son fils un poison probable.'—*Les Philosophes Français du XIX^{ème} Siècle*, p. 5.

Every opinion which seemed to point in the direction of spiritualism was eagerly welcomed, promulgated, and lauded; not because it was demonstrably true, but because it was supposed capable of preserving social order. And indeed when, looking back upon those times, we contemplate the misery and anarchy which disgraced what was an inevitable movement, and dimmed what was really noble in the movement, we can understand how many generous hearts and minds, fluctuating in perplexity, did instinctively revolt not only against the Revolution, but against all the principles which were ever invoked by the revolutionists. Looking at the matter from this distance we can see clearly enough that 'Materialism' had really no more to do with the Revolution than Christianity had to do with the hideous scenes in which the Anabaptists were actors; but we can understand how indelible was the association of Revolution with Materialism in the minds of that generation.

So profoundly influential has this association been, that a celebrated surgeon of our own day perilled his position by advocating the opinion, now almost universally accepted, but then generally shuddered at, that the brain is the 'organ' of the mind. He had to retract that opinion, which the pious Hartley and many others had advanced without offence. He had to retract it, not because it was scientifically untenable, but because it was declared to be morally dangerous.

The history of the reaction in France is very instructive but it would require more space than can here be given adequately to narrate the story.* Four streams of influence converged into one, all starting from the same source, namely, horror at the Revolutionary excesses. The Catholics, with the great Joseph de Maistre and M. de Bonald at their head, appealed to the religious sentiments; the Royalists, with Chateaubriand and Madame de Staël, appealed to the

* The reader may consult on this topic DAMIRON, *Essai sur l'Histoire de la Philosophie en France au XIX^{ème} Siècle*; and TAINE, *Les Philosophes Français du XIX^{ème} Siècle*.

monarchical and literary sentiments; the metaphysicians, with Laromiguière and Maine de Biran, and the moralists with Royer-Collard, one and all attacked the weak points of Sensationalism, and prepared the way for the enthusiastic reception of the Scotch and German philosophies. A glance at almost any of these writers will suffice to convince the student that their main purpose is to defend morality and order, which they believe to be necessarily imperilled by the philosophy they attack. The appeals to the prejudices and sentiments are incessant. Eloquence is made to supply the deficiencies of argument; emotion takes the place of demonstration. The hearer is charmed, roused, dazzled. He learns to associate all the nobler sentiments with spiritualistic doctrines, and all grovelling ideas with materialistic doctrines; till the one school becomes inseparably linked in his mind with emotions of reverence for whatever is lofty, profound, and noble, and the other with emotions of contempt for whatever is shallow and unworthy. The leaders of the reaction were men of splendid talents, and their work was eminently successful. But now that the heats of controversy have cooled, and all these debates have become historical, we who look at them from a distance can find in them no philosophical progress, no new elements added which could assist the evolution of Philosophy, and form a broader basis for future monuments. In political and literary history these attempts would claim a conspicuous position; in the History of Philosophy they deserve mention only as having made mankind aware of the limited nature of the eighteenth-century philosophy, and its extraordinary *lacune*. Their office was critical, and has been fulfilled.

One doctrine, and one alone, emerged from these attempts, and held for some time the position of a School. It made a noise in its day, but even the echoes have now become almost inaudible. A feebler doctrine scarcely ever obtained acquiescence; we must nevertheless bestow a few sentences on it to make our story complete. Eclecticism is dead, but it produced some good results, if only by the impetus it

gave to historical research, and by the confirmation it gave, in its very weakness, to the conclusion that an *à priori* solution of transcendental problems is impossible. For Eclecticism was the last product of philosophical speculation, the gathering together of all that philosophers had achieved, and the evolution from these separate achievements of one final doctrine,—which final doctrine is itself rejected.

Victor Cousin and Thomas Jouffroy are the chiefs of this School: one a brilliant rhetorician utterly destitute of originality, the other a sincere thinker, whose merits have been thrown into the shade by his brilliant colleague. As a man of letters, M. Cousin deserves the respect which attends his name, if we except the more than questionable use which he has made of the labours of pupils and assistants without acknowledgment. However, our business is not with Cousin, but with Eclecticism. Royer-Collard introduced the principles of the Scotch school, to combat with them the principles of Sensationalism. Reid and Stewart were translated by Jouffroy, explained and developed by Royer-Collard, Jouffroy, and Cousin. The talents of these professors, aided by the tendency towards any reaction, made the Scotch philosophy dominant in France. But Victor Cousin's restless activity led him to the study of Kant:—and certain doctrines of the 'Königsberg sage' were preached by him with the same ardour as that which he had formerly devoted to the Scotch. As soon as the Parisians began to know something of Kant, M. Cousin started off to Alexandria for a doctrine: he found one in Proclus. He edited Proclus; lectured on him; borrowed some of his ideas, and would have set him on the throne of philosophy, had the public been willing. A trip to Germany in 1824 made him acquainted with the modern Proclus—Hegel. On his return to Paris he presented the public with as much of Hegel's doctrines as he could understand. His celebrated Eclecticism is nothing but a misconception of Hegel's *History of Philosophy*, fenced round with several plausible arguments.

Gifted with great oratorical power, flattering the prejudices

and passions of the majority, tempted as most orators are to sacrifice everything to effect, and incapable, from native incapacity or from defective training, of gaining any clear insight, Victor Cousin by his qualities and defects rose to an eminence which was regrettable, because it overshadowed the efforts of nobler minds. He was the source of philosophical patronage, and he filled the chairs of France with professors who were his adherents, or who dared not openly expose his weakness. The consequence was, that, being crassly ignorant of Science, he kept Philosophy aloof from all scientific influences. The progress of centuries was ignored, and the methods of Scholasticism were once more brought into vogue. A painful cant of 'question begging' eloquence supplied the place of research. The clear, precise genius of France was for a time ashamed of its clearness, and in sheer terror of being thought superficial and immoral rejected the aid of Science, and went maundering on about *le Moi, l'œil interne, l'Infini, le Vrai, le Beau, et le Bien* in a pitiable manner.

In Germany, once the land of Metaphysics, the tendency has for some time past been decidedly in favour of the positive sciences. Even the younger Fichte makes it his boast that his philosophy never quits the sphere of reality, and always follows the inductive method. The *à priori* road is abandoned. Ontology finds few cultivators, and Psychology calls itself a *Naturwissenschaft*, and very strenuously seeks to discover the organic mechanism of thought.* The break up of the Hegelian school was coincident with the popularity of the Herbartian, or what may be called the school of mathematical metaphysicians; and the disciples have mainly distinguished themselves by their assaults on the *à priori*

* Among the most remarkable works are WAITZ: *Lehrbuch der Psychologie als Naturwissenschaft*, 1849; LOTZE: *Medicinische Psychologie*, 1852; FECHNER: *Elemente der Psychophysik*, 1860; WUNDT: *Vorlesungen über die Menschen und Thierseele*, 1863; WUNDT: *Beiträge zur Theorie der Sinneswahrnehmung*, 1862; and the researches of HELMHOLTZ: *Handbuch der physiologischen Optik*, 2nd edit. 1867. Some of the results of German psychological investigations will be found lucidly presented in J. D. MORELL'S *Introduction to Mental Philosophy on the Inductive Method*, 1862.

Method, the destruction of which is the necessary prelude to Positivism. Fichte the younger tells us that 'since the systems which aimed at the attainment of absolute knowledge have died out, and the Kantian maxim *that we can only comprehend truth as it stands in relation to human nature* has been reintroduced, it has become evident that all philosophical problems must be placed under the control of psychology. This is the essential character of that German speculation which has sprung up since the times of Schelling and Hegel. . . . We do not mean that any particular psychological doctrine (whether that of Kant, Fries, or Herbart) has been *finally* established, but simply that the science of the human mind and the laws of its intelligence must be made the universal starting point of philosophy.'*

If we examine the psychological writings of the day, we shall be struck with the change which has come over German Philosophy, since even the writers who are still hampered by metaphysical trammels are surprisingly eager to borrow all the aid they can from Science, while one and all see the absolute necessity of detecting in mental phenomena the determining physiological processes. And this tendency is still more visible in the outburst of Materialism which took place some fifteen years ago, recalling the old days of theological controversy.

In 1852, Moleschott, the physiologist, published a remarkable book, *Der Kreislauf des Lebens*, mainly directed against Liebig's physiological errors. It describes in graphic and popular style the 'circle of matter' from the mineral world to the vegetal world, and from the vegetal to the animal, and from the animal to the psychical world. The psychical? Even so. Moleschott is a frank materialist, admitting no realities but Matter and Force, as two inseparable ideas. All the phenomena of Life and Mind he relegates to the changes of Matter. In his celebrated chapter on Force, he attacks the old metaphysical conception of Force (*Kraft*) as

* J. H. FICHTE: *Contributions to Mental Philosophy*. Translated by J. D. MORELL, 1860, p. 88.

an independent Entity, reducing it simply to the properties of Matter. As we know Matter only through its properties, and never know the properties in the absence of Matter, the conclusion is 'kein Stoff ohne Kraft, keine Kraft ohne Stoff: no Matter without Force, no Force without Matter.'

The book created an uproar. In the same year, Karl Vogt, the celebrated naturalist, published his *Bilder aus dem Thierleben*. Many who forgave Vogt's red republicanism in consideration of his researches in Embryology, especially of the salmon tribe, were startled out of their tolerance when they found him, in an essay on the souls of animals, declaring that men are only animals, and that 'thought stands in the same relation to the brain as the bile to the liver.' Of course he meant nothing so extravagant as the words imply; and he afterwards declared that his meaning simply was the meaning generally accepted respecting thought as a function of the brain. But, like Proudhon's pistol shot—*la propriété c'est le vol*—the noise of this formula startled the world. The essay was unhappily one unworthy of such a man as Vogt: flippant and fragmentary, it could only serve to exasperate, not to convince. Nevertheless, so ready were men's minds to be stirred on this subject, that even this slight concussion hastened the general outbreak, and Rudolph Wagner (May 1853) wrote a letter to the newspapers, confessing that he discontinued the publication of his *Physiologische Briefe* because of the 'uproar and disgust' excited by his denunciation of Materialism, and by his unpopular views on the relations of Faith and Knowledge.

The uproar continued, and in 1854 Wagner declared his intention of discussing the question of a 'special soul substance' at the Göttingen Congress of physiologists. The challenge was gladly accepted by Ludwig; and Congress was alive with expectation. But Wagner was either too unwell to attend, or, as opponents aver, shrank from the discussion. At any rate it was quite clear that he would have found small support: 'The reader may form a conception of the

intellectual tendencies of men of science on this question when he reflects on the fact that among five hundred persons present, not one single voice was raised in favour of the spiritualistic philosophy.*

In the same year Wagner appealed to the wide public in an essay on Faith and Knowledge (*Glauben und Wissen*), in which he declared that in matters of Faith he thought with the poorest charcoal-burner, but in matters of Knowledge he adopted all the results of science. Vogt was roused. He replied in a terrible pamphlet: 'The Creed of a Charcoal-burner versus Science' (*Köhlerglaube und Wissenschaft*, 1855). This was succeeded by Büchner's famous 'Matter and Force' (*Kraft und Stoff*), which rapidly ran through seven or eight editions, and was for a time the 'best abused' book in Europe. Soon afterwards came Czolbe's *Neue Darstellung des Sensualismus*, which may be called the *Système de la Nature* of the nineteenth century. I cannot here enumerate the books and pamphlets which appeared on this subject; much less give any exposition of their views. It is enough to note the fact of the conflict, because even the most considerable opponents of Materialism, such as Wagner, Lotze, and Fichte, were quite willing to discuss the question on purely scientific grounds; and if they opposed the materialist school, it was because they saw, and I think justly saw, the failure of that school to give a satisfactory solution either of cosmical or psychical problems.

The intellectual ferment was beneficial. The materialists claimed and received a wide-spread sympathy in their efforts to root out the lingering Scholasticism, which obstructed Science and prevented the elaboration of a true Philosophy. They were applauded also for their resistance to official orthodoxy and compromise. They pointed to the inanity of ontological systems, and called upon men to enter fearlessly on the path of objective inquiry. They popularised many of the results of Science. It was a great gain to the majority, even of scientific men, and still more of philosophers, to learn,

* *Deutsches Museum*, edited by PRUTZ, 1854, No. 47.

as they learned from Dubois-Reymond* and Moleschott, that Force was not an Entity which ruled passive Matter, but that 'both were abstractions from things, each completing the other, each presupposing the other.' Force is the dynamical aspect of Matter, and Matter is the statical aspect of Force.

But while the public, impatient of Metaphysics, sympathised with this spirit, and applauded its revolutionary fervour, cautious, circumspect men of science could not but object to a rough-and-ready mode of settling intricate questions, which left all the essential difficulties untouched. They felt that only a first step had been taken in getting rid of the metaphysical entities; and that not much advantage was gained when these were replaced by mere phrases.

It is the sense of unexplained difficulties which keeps many scientific minds from adopting Materialism, even when they sympathise with the leading purpose of the materialists. In the cosmical discussion we need but a slight acquaintance with the results of Philosophy to be aware that all the phenomena are as legitimately held to be phenomena of Consciousness as phenomena of Matter, and that we know *nothing* of either Matter or Spirit except as postulates. In the psychological discussion we need but a more thorough application of the biological Method to disclose that the materialist view is quite as imperfect as the spiritualist view. If the hypothesis of a spirit is merely the introduction of a misleading phrase, which pretends to explain the phenomena by naming them, not less unphilosophical is the introduction of the famous formula respecting the brain as the organ of the mind, unaccompanied by any clear statement of what an 'organ' is, or what is included under the complex term 'mind.' If 'mind' is the collective name for a large group of functions, sensitive, emotive, intellectual, and active, Biology rejects altogether the exclusive assignment of these functions to the brain, and declares that to call the brain the organ of the mind is about as legitimate as to call the heart the organ

* DUBOIS-REYMOND: *Untersuchungen über thierische Electricität*, 1848, i. 38.

of life. If the brain is regarded simply as one of the factors in mental manifestations, the most important it may be, then Biology demands that the mechanism be displayed, and that the cerebral processes on which mental actions depend be exhibited in some such orderly connection as that which displays the part played by the intestinal canal in digestion, or the osseous and muscular structure in locomotion. Has any one done this? No one has attempted it. Materialism is powerful in as far as it invokes the Methods of Science, and proclaims the old scholastic habits of thought unsuited to our age. The sympathy it has excited, in spite of its narrowness, is a sign of the times; and when we couple with it the visible decay of all metaphysical systems, and the visible extension of Science, we cannot doubt that in Germany also the Positive Philosophy must ere long prevail, being as it is the only system which can embrace all tendencies and furnish a homogeneous Doctrine of the world, society, and man.

Nor are the signs less hopeful in England. An impatience of Metaphysics has long existed—an impatience not always, indeed, grounded on a clear recognition of the reasons which justify it, but sustained by the observation of repeated failure on the part of Metaphysics, and of increasing success on the part of positive Science. A painful degree of insincerity, and an uneasy alacrity in catching at any compromise which may for the nonce 'accommodate' the radically incompatible conclusions of Theology and Science, have always been, and continue to be, exhibited. Men wish to think, or wish the world to believe they think, that both Theology and Science may be true; meanwhile they steadily refuse to give up Science, and, at whatever cost to consistency, the tendency towards a thorough adoption of the positive point of view is manifestly growing. Metaphysics is out of court. Neither word nor thing finds favour. Ferrier's *Institutes of Metaphysics*, one of the most remarkable books of our time, is like a lonely obelisk on the broad flat plain: there are not even cairns beside it. The one great metaphysician who has formed a school,

Sir William Hamilton, energetically disclaimed all the pretensions of Ontology, and devoted himself to the explanation of the conditions of knowledge. His influence, aided by that of Mr. Mansel and others, has been purely destructive. If these distinguished writers are indisposed to adopt the positive point of view, they have at least effectively prepared for its future adoption by their demonstration of the futility of metaphysical speculation.

Turning from the Hamiltonian school to the thinker who has exercised the deepest and widest influence on our generation, Mr. Stuart Mill, we see an unmistakable illustration of the tendency of English thought to set aside theological and metaphysical explanations as no longer in harmony with present knowledge. Mr. Mill is a declared adherent of the Positive Philosophy: though not regarding that Philosophy as by any means perfect, nor disposed to accept every conclusion put forward by Comte, he has recognised the truth of the leading principles, and has largely contributed to their diffusion. It is characteristic of our condition that to the vast body of cultivated Englishmen his *Logic* has sufficed for all their instruction in Philosophy. The very celebrity of that work absolves me from further notice of it in this rapid sketch.

Another eminent thinker of the positive school is Professor Bain, who has restricted himself to Psychology, but whose writings display a thorough mastery of scientific Method, and a familiarity with all the sciences. In *The Senses and the Intellect* (2nd edit., 1864), and *The Emotions and the Will* (2nd edit., 1865), he has availed himself of all that has been discovered respecting the nervous mechanism, and has interpreted it by the light of patient psychological analysis. His pages are rich in information and suggestion. No one has more successfully exhibited the evolution of intellect even in the earliest phenomena of sensation: in Sensibility he displays the germ of Discrimination, and in Discrimination the germ of all Cognition. Nor has any one thrown such steady light upon the nature of voluntary movements and the physiological process on which they depend.

It is a matter of regret to me that my space will not admit a fuller account of these works, which assuredly will make an epoch; but I may point to one general conclusion bearing on my present argument, and it is this: The one department of inquiry still in favour which belonged of old to Metaphysics is the department of Psychology, and in this the only cultivators who have a large following are positive thinkers, namely, Professor Bain and Mr. Herbert Spencer.

The last-named writer is one daily rising into wider influence. In spite of the internecine warfare between his principles and the theological and metaphysical principles officially admitted, even antagonists are compelled to admit the force and clearness of his genius, the extent and profundity of his scientific knowledge. It is questionable whether any thinker of finer calibre has appeared in our country; although the future alone can determine the position he is to assume in History. At present he is too close to us for an accurate estimate; and, moreover, to this end his system should be before us in its entirety, whereas only two parts—*First Principles* (1862) and *The Principles of Biology* (1864-7)—have as yet appeared.* He alone of British thinkers has organised a System of Philosophy. Seeing that he adopts the positive Method, is thoroughly imbued with the positive spirit, and constructs his system solely out of the positive sciences, one cannot but raise the question, What is his relation to the Positive Philosophy? This question becomes the more pertinent because Mr. Spencer has on several occasions expressed his dissent from Comte's views, sometimes indeed exaggerating the amount of difference in vindicating his unquestionable originality, and implying an antagonism which does not exist. Even if I thought Mr. Spencer always in the right where he opposes Comte (and I am very far from thinking so), I should still claim him as a puissant ally of the Positive Philosophy, which is something

* Mr. SPENCER's other works are *Social Statics* (1851), *Principles of Psychology* (1855), two volumes of *Essays*, a small volume on *Education*, and a pamphlet on *The Classification of the Sciences*.

greater than Comte—it is the product of all History. This Philosophy will undergo many and important modifications; the whole tendency of Molecular Physics as now cultivated is one which must finally introduce such modifications. Mr. Spencer may impress on its details important changes, but he will nevertheless no more disturb the integrity of the Positive Philosophy than Schwann by his cell-theory, or Dubois-Reymond by his discovery of the muscular currents, disturbed the integrity of Biology. Comte was the first to create that Philosophy, as Bichat created Biology: successors may gradually displace many of the provisional ideas out of which these creations were formed, but the Method and the general structure will remain unalterable.

Mr. Spencer is unequivocally a positive philosopher, however he may repudiate being considered a disciple of Comte. His object is that of the Positive Philosophy—namely, the organisation into a harmonious Doctrine of all the highest generalities of Science by the application of the positive Method, and the complete displacement of Theology and Metaphysics. The peculiar character he impresses on it by his thorough working out in detail of the Law of Evolution gives a special value to his system; but the Positive Philosophy will absorb all his discoveries, as it will absorb all future discoveries made on its Method and in its spirit; rejecting certain *à priori* and teleological tendencies which he sometimes manifests, and disregarding his failures as it disregards the failures of Comte and every other seeker.

Am I claiming too much for the Positive Philosophy in claiming for it whatever the future may produce? To claim it for Comte would indeed be preposterous; but to claim it for that Philosophy which it is Comte's immortal glory to have extricated from the products of all the past, is only to claim it for HUMANITY.

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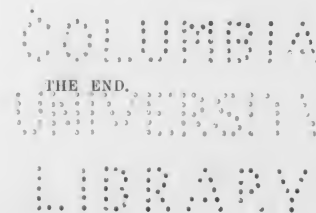
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